Drug & Cosmetic INDUSTRY

MARCH, 1950

FEATURE ARTICLES • •

HEALTH INFORMATION FOUNDATION		266
NAIL ENAMEL—KEY TO COLOR AND FASHION		268
MANUFACTURE OF TABLETS PART I	Ronald Clarkson	270
SALES VERSUS RESEARCH	Gustav J. Martin	272
PLASTIC PACKAGES	Harry Hilfer	274
AMINOPHYLLINE	Milton A. Lesser	276
THE SALES IMPORTANCE OF NEW PRODUCTS	Bernard Jeffs	278
PHARMACEUTICAL MARKETING PART II	John H. Hawley, Jr.	280

DEPARTMENTS • •

KEEPING POSTED	Thomas R. Farrell	261
PACKAGING AND SELLING	Frazer V. Sinclair	283
NEWS	Frank Child III	295
MANAGEMENT FORUM	Francis Chilson	307
PATENT THOUGHTS AND TRENDS	Thomas Cifelli, Jr.	316
YOUR TRADE-MARK RECORD	John H. Graham	320
INDUSTRY'S BOOKS	Harry G. Kelbly	323
COMPOUNDER'S CORNER	Milton A. Lesser	324
ADVANCING THERAPY	Milton A. Lesser	327
READERS' QUESTIONS	Milton A. Lesser	331
PERFUMER'S SHELF	Milton A. Lesser	332
ABREAST OF THE MARKETS	Frank Child III	335

THOMAS R. FARRELL, Editor
FRANCIS CHILSON, Production Consultant
MILTON A. LESSER, Technical Editor
HARRY G. KELBLY, Raw Material Editor
FRANK CHILD III, News Editor
HILDA C. McCOLLOM, Art Director

The Drug and Cosmetic Industry is published monthly by Drug Markets, Inc., Frazer V. Sinclair, President and Treasurer, Thomas R. Farrell, Vice-president and Secretary. Publication Address, 28 Renne Ave., Pittsfield, Mass., U. S. A. Editorial and General Office, 101 West 31st St., New York 1, N. Y., U. S. A.

Business Manager, Frazer V. Sinclair; Advertising Representatives, P. W. Alexander, Walter M. Brauneiss, C. R. Keeley, Dwight H. Early, 100 No. LaSalle St., Chicago 2; Production Manager, Katherine Hyde; Circulation Manager, Harry G. Kelbly.

Subscription price—$3.00 a year, in advance, Foreign Countries, $5.00. Single copies, 35c; Back issues, 50c. Entered as Second Class Matter, January 1, 1928, at the Post Office at Pittsfield, Mass., under the Act of March 3, 1879. Member of Audit Bureau of Circulations.

Contents Copyrighted 1950 by Drug Markets, Inc.

Drug & Cosmetic INDUSTRY

MARCH, 1950

FEATURE ARTICLES • •

HEALTH INFORMATION FOUNDATION		266
NAIL ENAMEL—KEY TO COLOR AND FASHION		268
MANUFACTURE OF TABLETS PART I	Ronald Clarkson	270
SALES VERSUS RESEARCH	Gustav J. Martin	272
PLASTIC PACKAGES	Harry Hilfer	274
AMINOPHYLLINE	Milton A. Lesser	276
THE SALES IMPORTANCE OF NEW PRODUCTS	Bernard Jeffs	278
PHARMACEUTICAL MARKETING PART II	John H. Hawley, Jr.	280

DEPARTMENTS • •

KEEPING POSTED	Thomas R. Farrell	261
PACKAGING AND SELLING	Frazer V. Sinclair	283
NEWS	Frank Child III	295
MANAGEMENT FORUM	Francis Chilson	307
PATENT THOUGHTS AND TRENDS	Thomas Cifelli, Jr.	316
YOUR TRADE-MARK RECORD	John H. Graham	320
INDUSTRY'S BOOKS	Harry G. Kelbly	323
COMPOUNDER'S CORNER	Milton A. Lesser	324
ADVANCING THERAPY	Milton A. Lesser	327
READERS' QUESTIONS	Milton A. Lesser	331
PERFUMER'S SHELF	Milton A. Lesser	332
ABREAST OF THE MARKETS	Frank Child III	335

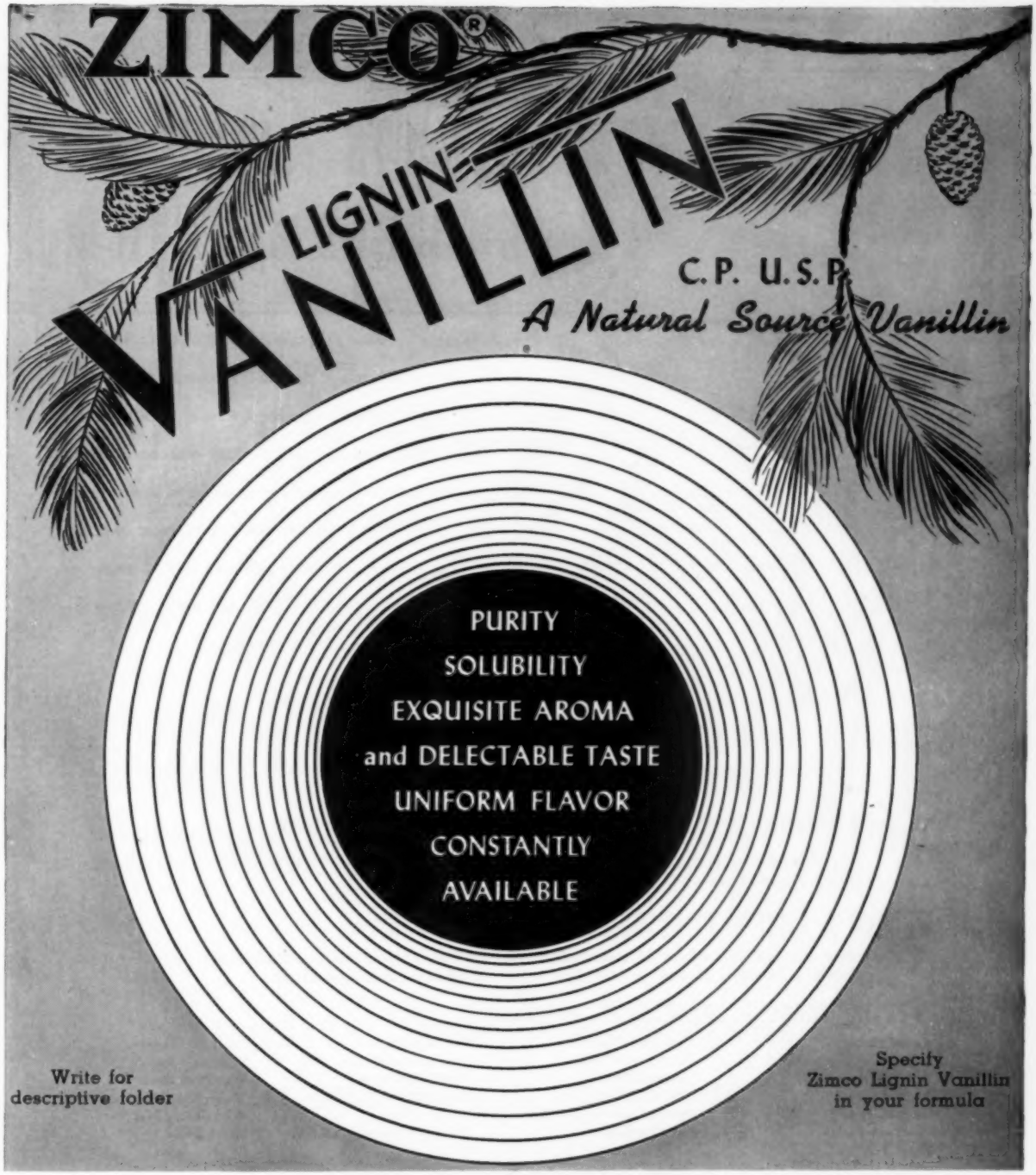
THOMAS R. FARRELL, Editor
FRANCIS CHILSON, Production Consultant
MILTON A. LESSER, Technical Editor
HARRY G. KELBLY, Raw Material Editor
FRANK CHILD III, News Editor
HILDA C. McCOLLOM, Art Director

The Drug and Cosmetic Industry is published monthly by Drug Markets, Inc., Frazer V. Sinclair, President and Treasurer, Thomas R. Farrell, Vice-president and Secretary. Publication Address, 28 Renne Ave., Pittsfield, Mass., U. S. A. Editorial and General Office, 101 West 31st St., New York 1, N. Y., U. S. A.

Business Manager, Frazer V. Sinclair; Advertising Representatives, P. W. Alexander, Walter M. Brauneiss, C. R. Keeley, Dwight H. Early, 100 No. LaSalle St., Chicago 2; Production Manager, Katherine Hyde; Circulation Manager, Harry G. Kelbly.

Subscription price—$3.00 a year, in advance, Foreign Countries, $5.00. Single copies, 35c; Back issues, 50c. Entered as Second Class Matter, January 1, 1928, at the Post Office at Pittsfield, Mass., under the Act of March 3, 1879. Member of Audit Bureau of Circulations.

Contents Copyrighted 1950 by Drug Markets, Inc.



Sterwin Chemicals INC.

SUBSIDIARY OF STERLING DRUG INC.

170 VARICK STREET, NEW YORK 13, N. Y.

445 Lake Shore Drive, Chicago 11, Ill.

Warehouse stocks: NEW YORK, CHICAGO, LOS ANGELES

Shipments made DIRECT FROM FACTORY: ROTHSCHILD, WISCONSIN

Additional stocks carried at: ATLANTA, DALLAS, PORTLAND (Ore.), RENSSELAER (N. Y.) ST. LOUIS, SAN FRANCISCO for emergency deliveries.

WORLD'S LARGEST SUPPLIERS OF VANILLIN

EXTRACTS... SOLID and POWDERED by PENICK

• Widely used for preparation of fluid extracts and special finished products, our "Optimo Brand" drug extracts are produced under the rigid step-by-step supervision of laboratory technicians and men trained in the scientific methods of operation. They offer the maximum in performance and economy. Our flavor retention control process guarantees to the user full flavor, piquant aroma and color preservation.

PENICK'S SOLID EXTRACTS

are drug products which have the consistency of thick honey, containing approximately 20 per cent moisture, and are usually employed in the preparation of fluid extracts of standard quality.

PENICK'S POWDERED EXTRACTS

are the vacuum evaporated, adjusted equivalents of the solid extracts in a stable form suitable for easy granulation.

PENICK'S CONCENTRATIONS

represent the extractives of botanical drugs in a higher degree of concentration than found in Extracts. Because of their hygroscopic nature they are less stable in air.

"OPTIMO BRAND"... GUARANTEE OF QUALITY

Arnica Flowers
Belladonna Leaves, U.S.P.
Belladonna Root
Buchu Leaves
Cascara Bark
Cinchona Bark
Ergot, P.T.
Euphorbia Herb
Fenugreek Seed
Gentian Root, N. F.
Golden Seal Root
Henbane Leaves, U.S.P.
Kava Kava Root
Licorice, U.S.P.
Nux Vomica, N. F.
Rhubarb, Chinese
Senega Root
Squill, White
Stramonium Leaves, U.S.P.
Uva Ursi Leaves
Valerian Root
White Pine Bark
White Pine Compound
Wild Cherry Bark
Yerba Santa

FOR THE MANUFACTURING TRADE ONLY

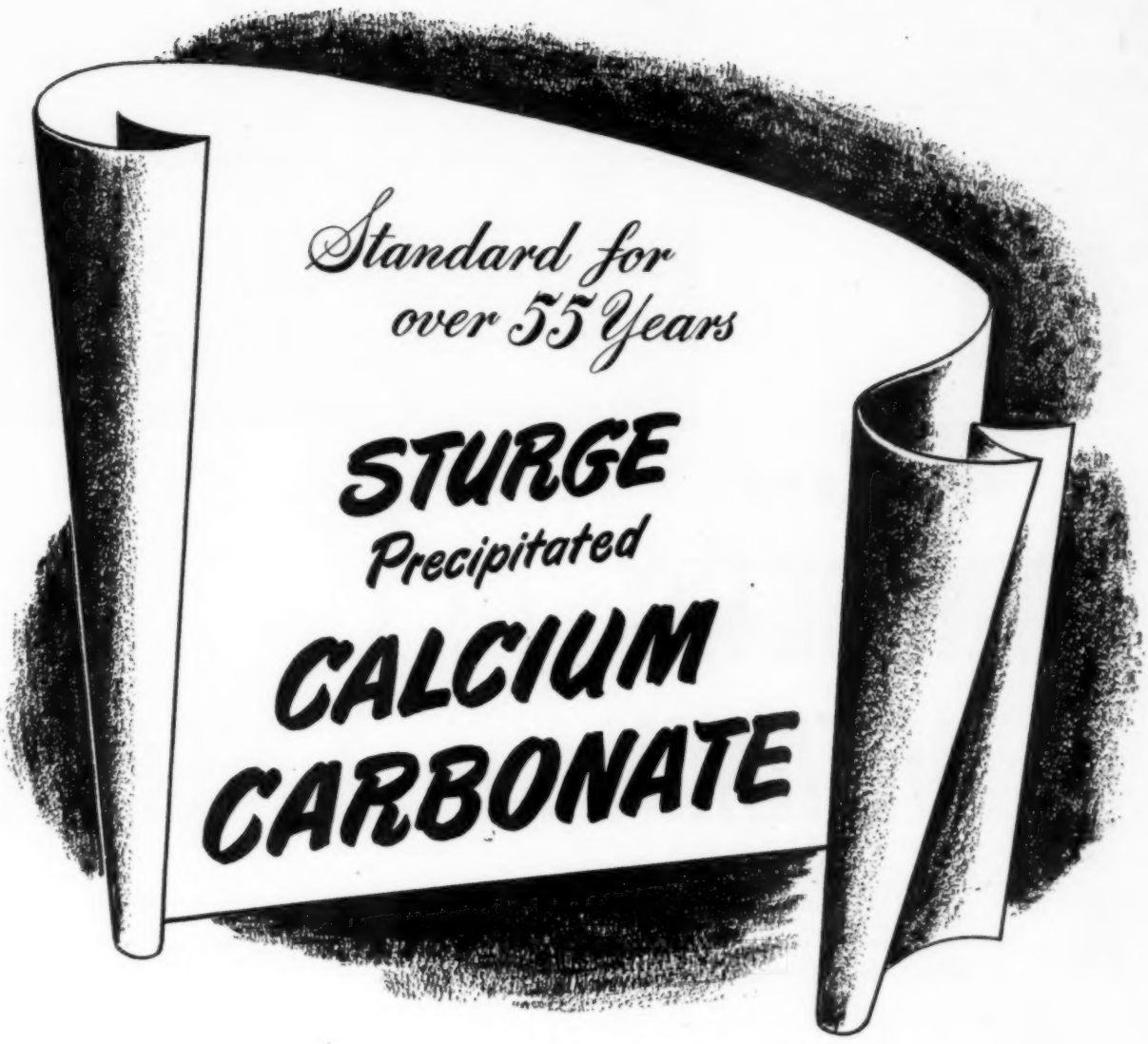
We Invite Your Orders and Inquiries

THE WORLD'S LARGEST BOTANICAL DRUG HOUSE

S. B. PENICK & COMPANY

50 CHURCH STREET, NEW YORK 7, N. Y.
Telephone, COrtlandt 7-1970

735 WEST DIVISION STREET, CHICAGO 10, ILL.
Telephone, MOHawk 5651



Quality and Uniformity

LIGHT, MEDIUM AND HEAVY GRADES

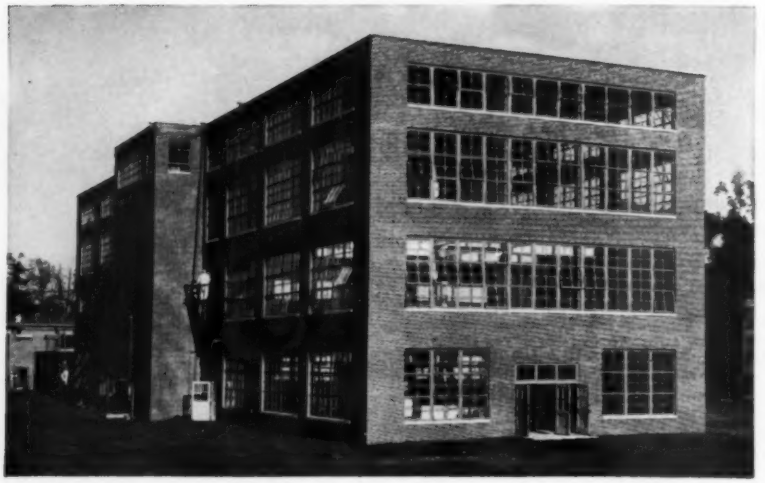
Rigid Uniformity in the Specific Grade Desired

★

Depend on Sturge for Quality and Uniformity

John & E. Sturge Limited

DISTRIBUTORS: H. J. BAKER & BRO., 271 Madison Avenue, New York 16, N. Y.



Merck & Co., Inc. completes new factory building at Rahway, N. J., for large-scale production of synthetic Vitamin A.

And now... SYNTHETIC VITAMIN A MERCK

A new member has joined the distinguished family of Merck Vitamins: SYNTHETIC VITAMIN A.

An initial, limited supply of this important vitamin is now available. Full production is expected within a few months from our new manufacturing unit devoted to Vitamin A. We are making every effort to complete these large-scale installations which will assure a dependable source of supply of Synthetic Vitamin A in the quantities you require.

We cordially invite your inquiries and advance orders.

CALL MERCK FOR VITAMINS

- Crystalline Vitamin B_{12}
- Thiamine Mononitrate
- Thiamine Hydrochloride
- Riboflavin
- Niacin
- Niacinamide
- Niacinamide Hydrochloride
- Pyridoxine Hydrochloride
- Calcium Pantothenate Dextrorotatory
- Ascorbic Acid
- Menadione (Vitamin K Active)
- Vitamin K_1
- Alpha Tocopherol
- Alpha Tocopheryl Acetate
- Choline

MERCK

MERCK VITAMINS

MERCK & CO., INC *Manufacturing Chemists* RAHWAY, N. J.

DELIGHTFUL fragrance of
rich Jasmine in
full bloom with the fascinating

Jasdoux Blanc

subtle French motif
. . . A favorite from out of the past . . .
down through the years . . . As lasting
and appealing as ever in the most modern
perfumes, toilet waters,
and cosmetics . . .

Florasynth
LABORATORIES, INC.
CHICAGO • NEW YORK 61 • LOS ANGELES 13
DALLAS 1 • DETROIT 2 • MEMPHIS 1 • NEW ORLEANS 13
ST. LOUIS 2 • SAN BERNARDINO • SAN FRANCISCO 11
Florasynth Labs. (Canada Ltd.) Montreal • Toronto • Vancouver • Winnipeg
Florasynth Laboratories de Mexico S. A. — Mexico City

In each of these great centers of the Soap, Perfumery and Cosmetics industries there is a Chiris company, with a complete production and distribution service. These companies pool all the experience and technical resources which nearly 200 years of outstanding leadership in the World's Essential Oil and Aromatic industries have made available to the House of CHIRIS.

ANTOINE CHIRIS Co., Inc.

119 WEST 57th STREET, NEW YORK 19, N. Y.

ESTABLISSEMENTS ANTOINE CHIRIS
GRASSE-PARIS

ANTOINE CHIRIS, LT.D.
LONDON

DPi

Announces

NEW LOW PRICES

TWO NEW POTENCIES

IN

MYVAX

SYNTHETIC VITAMIN A

FOR COMPLETE DETAILS AND LATEST QUOTATIONS PHONE, WIRE, OR WRITE

"Myvax" is a trade-mark)

DISTILLATION PRODUCTS *industries*

791 Ridge Road West, Rochester 3, N. Y.

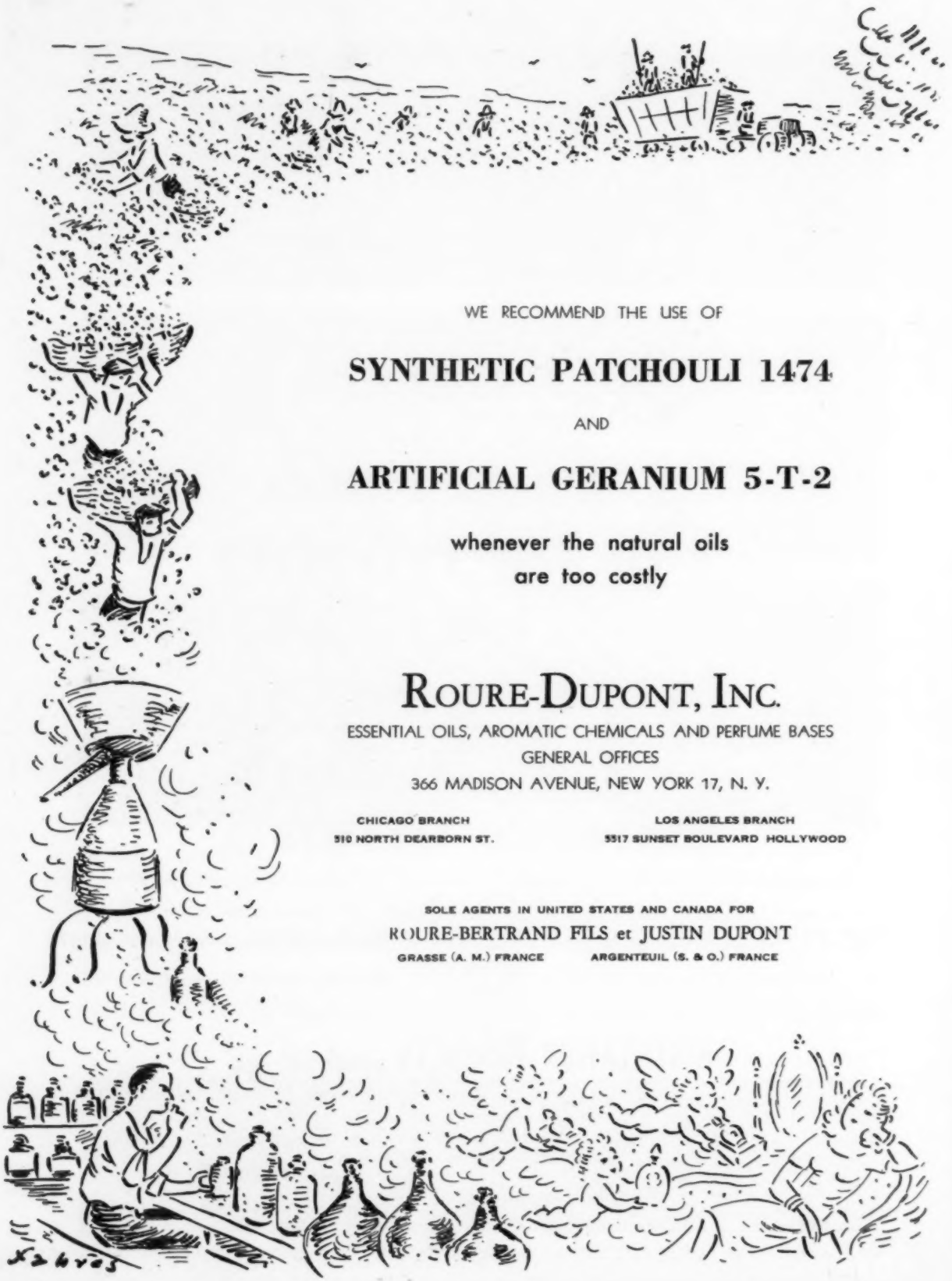
Division of Eastman Kodak Company

570 Lexington Avenue, New York 22, N. Y. • 135 South La Salle Street, Chicago 3, Ill.

Gillies & Loughlin, Los Angeles and San Francisco

Charles Albert Smith, Ltd., Montreal and Toronto

Distillers of Oil-Soluble Vitamins and Other Concentrates for Science and Industry; Manufacturers of High Vacuum Equipment.



WE RECOMMEND THE USE OF

SYNTHETIC PATCHOULI 1474

AND

ARTIFICIAL GERANIUM 5-T-2

whenever the natural oils are too costly

ROURE-DUPONT, INC.

ESSENTIAL OILS, AROMATIC CHEMICALS AND PERFUME BASES

GENERAL OFFICES

366 MADISON AVENUE, NEW YORK 17, N. Y.

CHICAGO BRANCH
510 NORTH DEARBORN ST.

LOS ANGELES BRANCH
5517 SUNSET BOULEVARD HOLLYWOOD

SOLE AGENTS IN UNITED STATES AND CANADA FOR

ROURE-BERTRAND FILS et JUSTIN DUPONT

GRASSE (A. M.) FRANCE — ARGENTEUIL (S. & O.) FRANCE

● An important ingredient in famous cosmetic and pharmaceutical formulas for nearly 100 years, Beehive Brand Beeswax has established a standard for purity and quality that is a guarantee of plus value in the products employing it.

Made only from the world's finest grades of crude beeswax—chemically tested for purity and uniformity—it is thoroughly processed and clarified, and sunbleached to a high degree of whiteness . . . all under expert laboratory control.

As an emulsifier and stabilizer it is valuable especially in cosmetic creams, toilet preparations, pomades and ointments where fine texture and attractive appearance are desirable. It does not settle out, turn watery or give a curdled appearance even under unusual conditions of shipment and storage. Many leading cosmetic manufacturers prefer it over all other emulsifiers, declaring that practical experience has proved it to be more economical in the long run.

We manufacture beeswax compounds and synthetics adjusted to the requirements of any manufacturer.
Write today for folder giving complete information.

Will and Baumer
CANDLE CO., INC.
Syracuse, N. Y.
Est. 1855

SPERMACETI • CERESINE • RED OIL • YELLOW BEESWAX • COMPOSITION WAXES • STEARIC ACID • HYDISTEAR

Colognes for Spring!

Add

new, fresh, fine fragrant colognes to your line

Your line of colognes can include

---

the classic pure eau de cologne
for which use our
EAU DE COLOGNE 1

---

a floral cologne—our
EAU DE COLOGNE III
With bouquet of Lilac or Gardenia

---

a heavier type—our
EAU DE COLOGNE RUSSIAN

---

a French bouquet—our
EAU DE COLOGNE I
with Ermosa bouquet

---

or an outdoor type—our
EAU DE COLOGNE FRENCH 4455-CO

We specialize in eau de cologne odors also for soaps and cosmetics generally. Let us assist you in making your choice.

schimmel & co., inc.

601 West 26th Street, New York 1, N.Y.

says the professor

HOOK 'EM WITH A BETTER SMELL ON THE END OF YOUR LINE!

Knowingly-scented bait will catch more fish... in more ways than one! For the product that *smells* better *sells* better... whether it be face cream or foot powder... nail polish or vitamin preparations... toothpaste or hair tonic.

No matter what your perfuming problem, you'll find it profitable to consult the technical department of MAGNUS, MABEE & REYNARD, INC. As one of the world's great suppliers of Essential Oils, Flavors and Perfuming materials, MM&R has had more than a half century of specialized experience in creating individualized odor — *or flavor* — personalities for every type of product.

Our facilities are available to you without obligation. Call on MM&R now!

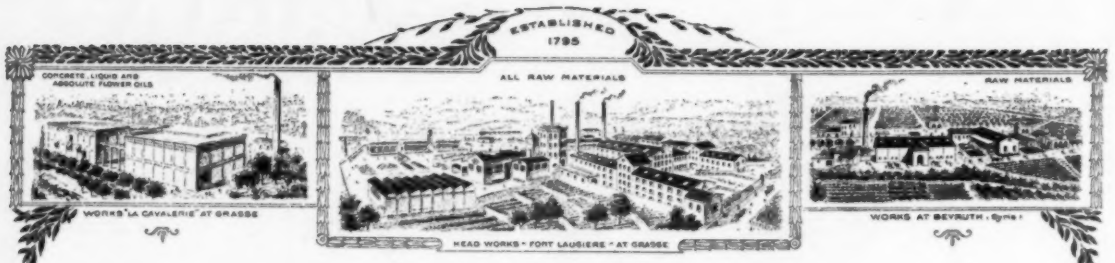
BUILDERS OF PRODUCT PREFERENCE through QUALITY ESSENTIAL OILS, PERFUMING MATERIALS and CONCENTRATED FLAVORS SINCE 1895

MAGNUS, MABEE & REYNARD, INC.

SINCE 1895 ... ONE OF THE WORLD'S GREATEST SUPPLIERS OF ESSENTIAL OILS

16 DESBROSSES STREET, NEW YORK 13, N.Y. • 221 NORTH LASALLE STREET, CHICAGO 1, ILL.

LOS ANGELES: BRAUN CORP. • SEATTLE, PORTLAND, SPOKANE: VAN WATERS & ROGERS, INC. • SAN FRANCISCO: BRAUN-KNECHT-HEIMANN CO.



LAUTIER FILS

GRASSE, FRANCE

Natural Flower Absolutes
Essential Oils, Concentrated Natural Fixatives
Synthetic Aromatics

MOUSSE ODORANTE

A superior quality Oak Moss intended for fine perfumery.

MOUSSE D'ARBRE

The standard LAUTIER FILS quality Oak Moss for use in popular priced perfumes and soaps.

LAUTIER FILS also offers the above qualities with most of the color removed.

MOUSSE de CHENE BLONDE
MOUSSE D'ARBRE BLONDE

The raw Oak Moss is carefully selected to conform with LAUTIER FILS specifications. It is processed at the Grasse factories by time-proven methods.

SANTAL des INDES ORIENTALES

LAUTIER FILS Sandalwood Oil East Indian is distilled at our Grasse factories from selected raw Sandalwood.

LAUTIER FILS, INC.

321 Fifth Avenue — New York 16, N. Y.

GRASSE PARIS LONDON BEYROUTH CHICAGO ST. LOUIS SANTIAGO

ROCHE ANNOUNCES

A NEW ERA IN

VITAMIN A

"By the Tons" production of synthetic vitamin means end to old purchasing headaches, dawn of day of better-tasting products at new low cost!

Yes, the dream of huge production of synthetic vitamin A has become a fact. The great new plant at Roche Park, an outstanding achievement in chemical engineering is right now in actual operation. Its myriad of stills, retorts, and fantastic-looking apparatus, carefully controlled by teams of Roche-trained experts, are daily yielding billions of units of vitamin A of beautiful light color and almost odor- and taste-free.

OUR PROMISE. Fulfilling our promise to the industry, announcements have been withheld until these statements could be made with assurance:

1. Roche has been in commercial production for weeks.
2. Roche has substantial inventories on hand.
3. Roche can make immediate shipment.

THE THREE FREEDOMS

NEW BUYING FREEDOM. Both the acetate and palmitate esters of synthetic vitamin A 'Roche' are in steady supply, just like the vitamins B_1, B_2, B_6, C and E. We produce by the tons, so that you can at last learn the habit of ordering when and as needed, at the prevailing market.

NEW PRODUCT CONTROL FREEDOM. No longer having to face large fluctuations in potency, color, taste and quality, the door is now open for you to establish new high criteria in finished products containing vitamin A by using the 'Roche' synthetic vitamin.

NEW COST FREEDOM. Think of the thousands of dollars you have spent to protect your vitamin A supply lines; large sums of money tied up, huge inventories subject to deterioration and taking up valuable space, all while having to gamble against possibility of a drop in market price. Think, too, of your costly product failures traceable to quality variations in your raw material. Synthetic vitamin A palmitate 'Roche' is standardized at 800,000 to 1,000,000 units per gram (by tentative U.S.P. XIV method including Morton-Stubbs correction). Synthetic vitamin A acetate 'Roche' in Corn oil is standardized at 1,000,000 units per gram. Both are constant in quality, and are available at a far lower price than you were paying only some months back for lower potency A oils.

ACT NOW...LOOK AHEAD. Check your inventories of printed cartons, labels and packaged pharmaceutical products today, fix the date for your first production with synthetic vitamin A 'Roche'. Samples and technical data are available.
Right now, send in your orders by wire or phone.

VITAMIN DIVISION • HOFFMANN-LA ROCHE INC.

Nutley 10, N. J. • Nutley 2-5000

IN CANADA: HOFFMANN-LA ROCHE, LTD., MONTREAL, QUE.

Wanted:

I want a job selling perfumes and cosmetics.

I know the cities and towns where these products are sold in worthwhile volume, where all the capable, energetic retail sellers of cosmetics are located, and where the sales expense of calling will return a profit.

When I enter the store of any of these retailers, I am sure of a welcome based on long, friendly associations. I know the folks who do the buying; more important I know the folks who do the selling. I know how to get the attention of these folks, how to get my story over without stepping on anyone's toes.

I want to do more than just send you an order which would only mean that your goods are at rest in that store. I like to sell and my idea of selling is to keep your goods moving through the store to Miss and Mrs. Public.

I would expect you to give me a clear, concise story of your product—its quality, competitive advantages and selling points. I would need to know your advertising program, so that I can build up in the mind of these retail folks the expectation of substantial consumer interest. I want also to know about your company policies so that I can win friendly admiration for your products and your company.

I can sell perfumes and cosmetics because I know the people who in turn sell them to the public.

Let me carry the kind of message which encourages retail display for your product and friendly, informed selling behind the counter and you will soon see results in increased retail orders.

I have been selling perfumes and cosmetics for over 33 years. Any good retailer will give you a reference.

My name is BEAUTY FASHION:

Do you need a top-notch, tested, retail salesman?

"Your antihistaminics didn't work on me! I'm going to take some APC Tablets."

KEEPING POSTED

Synthetic Vitamin A Now in Production

HOFFMANN-La Roche, Merck and Pfizer are now engaged in an effort to convert pharmaceutical manufacturers from the use of natural vitamin A from fish liver oils, to the use of the synthetic vitamin A. The price for vitamin A palmitate has been lowered to 30 cents per million units for a product which assays between 800,000 and 1,000,000 units per gram. Hoffmann-La Roche reveals that it has been producing for many weeks building up an inventory which assures adequate supplies for all, even if a rapid shift to the synthetic vitamin should materialize. Although there is still a rather important price advantage in favor of the natural vitamin A, the advantages of the synthetic product are expressed by Paul J. Cardinal, vice-president in charge of the Roche bulk vitamin division, as follows:

"Whether buying on a physician's prescription or over the counter, most persons fail to follow dosage instructions regularly if they experience noticeable unpleasant sensations of after-taste from the product taken. That can mean lost benefits, in any case it affects repeat sales of that product. Synthetic vitamin A offers an opportunity to insure continuity of market for products containing vitamin A. Its high purity and stability, its remarkable defiance of detection through taste or odor in finished products, the standardization of its potency within narrow range, are certain to minimize problems in production, control and marketing. On top of all this is the elimination of need for heavy gambling on future price trends when purchasing."

The product, which is packed for shipment in seamless aluminum bottles sealed under nitrogen, is standardized and labeled in terms of the tentative U. S. P. XIV specifications. A million units means that amount as determined by the Morton-Stubbs correction procedure.

Hoffmann-La Roche replaced vitamin A from natural sources with synthetic vitamin A palmitate produced in its pilot plant, in its Supradin capsules last Spring. As production of the bulk vitamin expanded, it successively introduced in all other Roche pharmaceutical specialties containing vitamin A.

Drug Outlook in England

IT SEEMS that the need exists in England to cut the cost of the "pharmaceutical services" under the National Health Service Act by £10 millions. It will be recalled that this could be accomplished by imposing a fee of one shilling on each prescription, payable by N.H.S. patients. However, the Chemist and Druggist (London) says that "it has become all too evident that the shilling per prescription charge, so far as its imposition and collection is concerned, is hedged about with so many difficulties and anomalies as to make it doubtful if it will be proceeded with, and certain that it would not bring in so large a total. The need for economizing to the extent of £10 millions on the pharmaceutical services, however, remains."

To implement economy in the pharmaceutical services a committee on prescribing has been appointed "to consider and report from time to time whether it is desirable and practicable to restrict or to discourage the prescribing by practitioners giving general medical services under the N.S.H. acts of 1946 and 1947, of (a) drugs and medicines of doubtful value or of unethical character; (b) unnecessarily expensive brands of standard drugs." Since the committee's report must substantially be based on its opinion as to what type of products come under these three black-list categories, says the Chemist and Druggist, it is regretted that the committee shows a preponderance of academic members. This London journal concludes with the $64 question:

"Is the basic principle of the health service—the absolute right of the doctor to prescribe whatever medicines he considers necessary in the best interests of his patients—to be sacrificed in order to achieve the proposed 'economy?' "

Horse Liniment and Corns

LINIMENT for the legs of horses does not have the same descriptive properties as a product for treating corns and calluses on human feet, in the opinion of the Commissioner of Patents expressed in the recent case of Whitehall Pharmacal Co. vs. Wagner. While conclusions as to marketing methods or precise constituents of goods should be made with caution in absence of testimony relating thereto, it cannot be questioned that many drugs and pharmaceuticals might be used for either man or beast, and the fact that one product is used on humans and another on animals is not necessarily controlling, but the difference in use is entitled to considerable weight when the goods

differ to such an extent as in this case. In cases where drugs or other products are found to have the same descriptive properties, although they differ in use to an extent such as the goods here, where one is suitable for animals and another for humans, there must be a showing of some common relationship which the present record does not disclose.

Drug to Produce "Pure Mood Effect"

A COMBINATION of Dexedrine and Amytal is being marketed by Smith, Kline & French to produce what they call a "Pure Mood Effect." SKF states that this mood effect can best be described as one of tranquility, cheerfulness, assurance, optimism, energy, and general well-being. The product is said to provide relief from mental and emotional distress marked by discouragement, apathy and pessimism; tearfulness and depression; anxiety, nervous fears and phobias; irritability, excitability and agitation; difficulty in thinking and communicating thoughts to others; diminution of work capacity; sensations of weakness and exhaustion; undue preoccupation with vague somatic complaints.

Too bad this product has to be sold on prescription as many marriages might be saved by the husband or wife slipping some of these in the other's coffee. No doubt all of us know several people who, in our opinion, could stand this kind of a "mickey."

Flor de Habano Like Abano

FLOR de Habano" used on perfumes was recently held by the Commissioner of Patents to be confusingly similar to "Abano." The two names were held to phonetically virtually identical and the addition of the descriptive words "Flor de" could not be considered sufficient to distinguish therefrom in the case Ex Parte Rejane, Inc.

Protinal Like Provatol

THE name "Protinal," sought to be registered by National Drug Co. as a trade-mark for an amino acid preparation, was found by the Commissioner of Patents to be confusingly similar to "Provatol" used by Wyeth, Inc. as a mark for concentration and preparation rich in vitamin activity.

No Conflict in Products

IN THE case of Wyeth, Inc. vs. Jeffreys Laboratories, Inc. the Commissioner of Patents decided that a bacterial enzyme material comprising a culture of enzyme-producing bacteria or granular solids, and an extract of such culture or a concentrate of such extract for the hydrolysis or degradation of starchy or proteinaceous substances in the pre-cooking, conversion or fermentation of grain marshes does not have the same descriptive properties as the elixir of the digestive ferments. The marks consisted of the word "Liquezyme."

SKF Sues to Protect Dexedrine

SMITH, Kline & French Laboratories has brought suit in Chicago against the Evron Co. and its partners for what SKF calls "counterfeiting" of its Dexedrine tablets. Charging that Evron is marketing tablets which imitate SKF Dexedrine tablet design and color—to permit "substitution"—, Smith, Kline & French is suing in the Federal Court for an injunction and $100,000 damages. Defendants in the suit are Lester Kramer, identified as an Evron Co. salesman, and Frank Brown, Harvey H. Udesky, and Jack Udell, identified as co-partners of the firm, which is said to be doing business at 2314 Van Buren St., Chicago.

The suit states that SKF has manufactured and marketed Dexedrine tablets since 1939, first using a round yellow single-scored tablet, then switching to a triangular orange tablet in May 1949. This new tablet was designed solely to identify the tablet as an SKF product, the suit says, and was widely advertised to the medical profession and the drug trade. The Evron Co. is accused of marketing duplicates of this tablet, and inducing and enabling druggists to fill physicians' prescriptions for SKF's Dexedrine tablets with this substitute tablet. This deception is made possible, the suit states, by the fact that Dexedrine tablet prescriptions are not filled in SKF containers but in the druggist's own containers.

The suit is the beginning of an intensive campaign to halt what is called "counterfeiting" of Dexedrine tablets, according to O. J. May, vice-president of Smith, Kline & French Laboratories, who says:

"This counterfeiting is of great concern to us, and not merely because of our commercial stake in Dexedrine tablets. As a manufacturer of ethical pharmaceuticals, we must guard our reputation among the medical profession and the drug trade; we must maintain absolute control over the products which are recognized as ours. Adulterated counterfeited Dexedrine, masquerading as a product of our plant, could be very dangerous to the patient and at the same time extremely harmful to us. Physicians must be able to prescribe our products with confidence that the patient will receive the product prescribed, not a spurious drug. We intend to gain that confidence by ferreting out everyone connected with the counterfeiting of SKF Dexedrine tablets."

Lilly and P. D. Sued as Capsule Trust

EARLY last month the Department of Justice filed a civil anti-trust action against Parke, Davis & Co. and Eli Lilly Co., charging that these two companies are trying to monopolize the sale of hard gelatin capsules. The companies are charged with having obtained control over machinery for making and filling hard capsules, this control having been used "to achieve and maintain a monopoly over the manufacture and and sale of such capsules." Further charges are that:

1. The companies "fixed prices on hard gelatin capsules through an exclusive patent-licensing arrangement."

2. They leased machinery for filling the capsules only when firms taking leases agreed to purchase the capsules themselves from the defendant concerns.

"As the result of these illegal activities the defendants together produce and sell more than 90 per cent of all hard gelatin capsules sold for human consumption in the United States today," the Justice statement declares.

The suit asks that the defendants be required to:

1. Sell filling machines which they now have on lease to any person now holding a lease and wanting to buy.

2. Lease or sell machines to any prospective buyer or lease-taker "upon their terms" and furnish any

applicant "the know-how" necessary to manufacture and operate capsule-making machinery."

J. K. Lilly, Jr., president of Eli Lilly & Co., states that the charges of the Government are unwarranted, and states the following as the facts:

1. All patents relating to basic machinery for the manufacture and filling of hard gelatin capsules have long since expired, and anyone desiring to enter the field is free to do so.
2. There are no price fixing agreements between Parke, Davis & Co. and Eli Lilly & Co. fixing the price of capsules.
3. There are no tying clauses in the leases requiring the lessee to purchase and use only capsules produced by the company.
4. As a result of competition in the hard gelatin capsules field, the price of capsules and the rental of filling machines are at such levels that the rate of profit which is derived therefrom is extremely modest.

Patent Law Changes Desired

LEGAL blessing to the patenting of "discoveries" as well as inventions, thus permitting the patenting of natural substances, such as antibiotics, which are now almost unpatentable, is one of the changes in the patent law contained in a bill now before Congress, Roy C. Hackley, chief of the patent section of the Department of Justice, told members of the research and development section of the American Drug Manufacturers Association last month. Another change contained in the bill would authorize the judge to require licensing and setting of reasonable royalties for new products in the health field.

The differences between obtaining a patent and enforcing a patent in the health field was the theme of Mr. Hackley's talk. He pointed out that the courts are very reluctant to uphold patents in medicines because of a dislike to create a monopoly in the public health field. He stressed that this is a real problem faced by the industries having to do with health that is not faced by other industries. He expressed the belief that the proposed legislation might go a long way in providing a solution to this difficulty faced by these industries. (A rather full discussion of pending patent legislation is given in Patent Thoughts and Trends starting on page 316 of this issue.")

Dentistry in England

THE fee basis on which dentists in England are paid is such that it "encourages men to cut corners, to skimp on the job," said Dr. H. B. Fenn, an instructor at the famous Guy's Hospital in London. Dr. Fenn, who recently attended a meeting of the Chicago Dental Society, explained that the fee paid for preventive work in the school clinics and for general care of children's teeth is so low that for all practical purposes it has been discarded, and that such lack of care is playing havoc with the teeth of England. "Orthodontia, the branch of dentistry devoted to the straightening of irregular teeth, has also suffered," Dr. Fenn said, and added, "I do not know of a single dentist enrolled in the plan who is engaged in orthodontia. The only work of this kind is being done by men who are still in private practice and by men in the clinics."

Dr. Fenn estimated that the average dentist enrolled under the Government plan has a gross income of about $15,000 a year; after paying his office expense and other outlays, he has a net income before taxes of about $7,500, and England's income tax takes about one-half of his net income. Dr. Fenn stated that "socialization has provided more medicine and dentistry for more people, with a lower grade of work, and at a higher cost."

But although the quality of dental care is deteriorating, the Journal of the American Dental Association points out that the government program of providing "free" dental service to all citizens has extended dental services to large numbers of persons which they might otherwise have not received and has increased the practice of dentists, particularly in poor neighborhoods. "However, these two assets are counterbalanced by many liabilities which already have lowered the standards of dental practice and threaten to lower still further the standards of dental health," says the Journal, which continues:

"Dentists who accept all patients who present themselves for treatment work harder, longer hours and under greater nervous strain than formerly. Although their income has improved, their health has suffered. Harried and hurried they are unable to render the quality of service which they formerly gave their regular patients. Under these circumstances, patients become disgruntled, dentists become distracted and the good will of their practice deteriorates. Dentists who restrict the number of new patients in order to provide their old patients with high quality service have found their income seriously reduced.

"Dentists whose practices consist largely of extraction of teeth and the construction of dentures experience little difficulty in obtaining authorization of estimates for such services from the Dental Estimates Board. Eight dentists on the Board authorize such estimates at the rate of 16,000 a day—a mere 2,000 per estimator.

"Dentists that insist on providing patients with conservative restorative dentistry experience more difficulty in obtaining authorization. Estimates for crowns, bridges, inlays and periodontic treatment, in most instances, must be approved by a member of the Dental Estimates Board and frequently by a Ministry dental officer. This regulation delays treatment, places a premium on conservative dentistry, irritates the patient and reduces the dentist to the status of an automaton in the hands of a government agency. Conscientious dentists object strenuously to the Board's policy of granting almost blanket approval for blood and vulcanite dentistry while granting only limited approval for conservative service.

"The profession is beginning to realize that approval or disapproval of estimates is influenced by costs rather than by the patient's welfare. Under these conditions many dentists are finding it a great temptation to give up the endless struggle for the right to give their patients the treatment that they think best and to take the line of least resistance by estimating for treatment (the type of service) which they know will be approved immediately."

Fair Trade and Consumer Cost.

A PRICE survey of eighteen of the country's best-known nationally advertised brands of drug store products reveals that the consumer pays slightly less for twelve of these products in fair trade law states, than in non-fair trade law states, and only slightly more for six, according to Maurice Mermey, director of the Bureau of Education on Fair Trade. Also a study on retailer efficiency shows that drug stores in the forty-five fair trade law states—in the aggregate—have a

lower operating cost than do those in the non-fair trade states (Missouri, Texas, Vermont and the District of Columbia).

"Since all products in this price survey are typically used as loss-leaders by predatory price-cutters in the non-fair trade area," Mr. Mermey said, "the scant differential noted in the price survey proves that fair trade prices are, indeed, the lowest at which a retailer can sell these products and earn an honest profit. They also show conclusively that the protection of trademarks, manufacturers, distributors and consumers, the objective of the fair trade laws, is achieved at no cost to the American people."

"The cost of operations study," Mr. Mermey said, "showed that operating expenses in 1948 of drug stores in the fair trade states averaged 26.17 per cent of sales while comparable figures for stores in the non-fair trade area was 27.57 per cent of sales. Thus, in terms of retailer efficiency, there is an absolute difference of 1.4 per cent in favor of fair trade stores," Mr. Mermey explains, "but expressed as a percentage of the lower operating cost figure, stores under fair trade show 5.35 per cent greater operating efficiency." The data covering the prices of leading national brands of dentifrices, laxatives and headache remedies were gathered from 700 stores in the 45 fair trade states and 70 stores in the non-fair trade areas. Included in the sample were independent and chain stores in both urban and rural areas. Similar types of stores were compared and prices were weighted according to sales volume.

Perfumes in Cosmetics

THERE are five standards by which perfumes in cosmetics may be judged, Dr. Everett G. McDonough, of Evans Chemetics, told the American Society of Perfumers last month. These standards are safety, effectiveness, aesthetic appeal, stability, and economy. Safety involves the problem of systemic or local damage resulting from contact with the skin. Reasons for this irritation is the larger use of synthesized material in place of naturally occurring essential oils; perfumes are now being used in an increasing number of cosmetics some of which, being themselves potential irritants, carry the possibility of placing the skin in a more sensitive state so that the perfume then could cause irritation; allergic reactions. With regard to allergic reactions, Dr. McDonough said: "It has always surprised me that such emphasis was placed on certification of colors at the various hearings before the passage of the Food, Drug, and Cosmetic Act, whereas certification of perfume materials was not considered and probably will never be a requirement of the law."

"Stability is very closely associated with safety," said Dr. McDonough, "because often the product when freshly made is safe for use, but, while standing, develops within itself reaction products that can be extremely injurious. Thus in stability we are concerned with: (a) the effect of the perfume material on the product; and (b) the effect of the product on the perfume material. Regarding the first of these considerations, Dr. McDonough pointed out that a cream or clear shampoo can have its stability destroyed by use of certain perfume oils, that discoloration effects may result from use in alkaline media of vanillin, eugenol, methyl anthranilate, patchouli, bergamot, citral, and phenylacetaldehyde. "Some perfume oils are so powerful in their ability to destroy an emulsion that they are actually used in testing the stability of an emulsion, as witnessed by the use of terpineol for the destruction of water-in-oil emulsions made from absorption bases," he added. As to the second consideration, Dr. McDonough said: "Even in long-established lines of products we see lack of stability of odor, resulting in products that do not smell at all like the original item that was placed on the market."

Aesthetic appeal ties in with safety and stability, said Dr. McDonough, because a product that smells very nice and is appealing when fresh,. might develop definite off-notes during marketing. "Development of these off-notes is not due entirely to the composition of the product," continued Dr. McDonough, "but may be due to unusual storage conditions, packaging materials, or other factors not anticipated in the laboratory evaluation of the aesthetic appeal of the product." He indicated that a perfume oil often affects the aesthetic appeal of a product by changing its form or consistency or color. Thus inclusion of a perfume might change the viscosity of a product enough to make it disagreeable to use or may react with pastel coloring materials to give off-colors or quick fading colors.

Effectiveness of perfume is often dual in its requirements, as in the case of lipsticks in which the perfume must not only impart a nice fragrance but also must cover the fatty notes and the metallic taste of certain lakes that are used in highly pigmented lipsticks. Another example is the flavoring material in a tooth paste which must impart sweet smelling characteristics to the breath of the user. Certain oils have oxidation inhibiting action as amyl salicylate in soaps. "The dual function of aesthetic appeal and imparting odor value to the areas of application has been emphasized sharply by the recent popularity of hair preparations," said Dr. McDonough. "The higher absorbability of hair as compared to skin, and the retention of hair over long periods of months against the surface of the skin, which wears off at a rapid rate, has brought into focus certain new problems, particularly the 'wearing qualities of perfume.' In addition, hair has a selective absorbability whereby it may absorb only certain of the odor constituents; the woman thus becomes desensitized to the odor notes of these components by constant association with them, and, upon subsequent use, may feel that the product has become sharp and unappealing, even though the cosmetic may have exactly the same fragrance that influenced her initial purchase of it."

Economy means nothing other than more efficient and economical production of natural occurring products and cheaper synthesis of fragrant organic chemicals, said Dr. McDonough, who pointed out that the perfumer is often embarrassed by a lack of freedom of choice of materials simply because the product cannot stand an expensive perfume oil.

Financial Outlook in Industry

"OVER-all sales of the drug industry are unlikely to differ this year greatly from the 1949 total, which approximated the record showing of 1948," says Standard & Poor's February 16 analysis of drugs and cosmetics. "Sales of the ethical division may score a further small gain, aided by enlarged production of newly developed products. Sales of the predominantly proprietary companies in most cases are likely to approximate those of a year earlier.

"Indications are that exports of drug companies as a group will suffer to some extent from devaluation of currencies of numerous foreign countries since 1949. However, the loss of this business will be offset to some

extent by greater sales of subsidiaries and/or branches operating in foreign areas.

"No great changes in earnings of the proprietary companies appears likely, with improvement limited in a few instances. A slight increase in earnings appears probable for most ethicals. The razor blade and cosmetic divisions will continue extremely competitive, and results probably will be mixed, reflecting the degree of success of advertising and promotion programs. Dividends generally are expected to equal 1949 payments."

The A.M.A. and Antihistaminics

THE Council on Pharmacy and Chemistry of the American Medical Association has finally given its studied opinion regarding the use of antihistaminics in cold therapy or prophylaxis. The Council, in a lengthy report in the February 25 issue of the Journal of the A. M. A., very precisely states that "the evidence so far presented should be properly classified as the honest opinion of the investigators and not as fact." In conclusion the Council says that "until a scientifically acceptable study is performed, the true effectiveness of the antihistaminic drugs in the control of the common cold cannot be evaluated." The Council seeks to be constructive in offering as a guide for further investigations a procedure which is its opinion "would be a true test of these agents in the treatment and prophylaxis of the common cold."

"With over-the-counter sale," the Council warns, "careless and habitual use of the antihistaminics may be expected and the medical profession should anticipate similar serious reactions. Basic research is indicated on the chronic toxicity of these agents in human subjects." The Council reviews the results reported by four groups of investigators covering 2,357 patients, more than one half being studied by a single observer. Summarizing its analysis, the Council says:

"The diagnostic methods employed have not conclusively demonstrated that the condition treated was actually the common cold. Over half of the cases were investigated in studies with inadequate controls or even without controls, and the interpretation of the results obtained are open to question." It further says: "none of the studies established the diagnosis of a common cold beyond reasonable doubt. By exclusion of bacterial infection as a cause, one cannot arbitrarily assume that a virus is the agent responsible for the appearance of symptoms: Allergy may be involved. Acceptance of the patient's own diagnosis of a cold introduces many sources of error. The patient may have been mistaken in his belief that he was getting a cold; he may have been manifesting the symptoms of an allergy, or his 'cold' may have been aborted without the aid of any therapeutic agent. By physical examination alone, the cause of coryza certainly cannot be established as the virus of the common cold. Thus, in none of the studies is there clearcut evidence of a verified diagnosis of the common cold."

The Council adds that the prophylactic study of one group, "while suggestive, requires verification because the series is small and contrary to the experience of allergists." It points out that "the antihistaminic agents apparently produce considerable subjective relief owing to inhibition of nasal discharge. Similar results may be obtained by the use of ephedrine and atropine."

Commenting on the studies as a whole, the Council says:

"The acceptance of claims for therapeutic or prophylactic value of antihistaminic agents in the common cold requires demonstration that the diagnosis and cure must not be left to the descretion of patients, and the interpretation of results should be unquestionable. The evidence so far presented should be properly classified as the honest opinion of the investigators and not as fact. The common cold is such an economic hazard that this opinion must be checked by more basic research in the pathogenesis (origin and development) of the disease and the toxicity of the drugs employed, as well as by more authentic clinical evaluation."

In detailing an investigation technique, the Council suggests the use of a large group of normal volunteers in whom allergy has been eliminated by history and proper tests. One third should be designated as the prophylactic group, another third as the treatment group and the remaining as a control.

Steroid Hormone Proposals

WHILE production of ACTH, cortisone and similar hormone substances will be greatly increased, five national advisory councils have recommended to Surgeon-General Leonard A. Scheele of the U. S. Public Health Service, that the total supply be used for research, and that the public be urged to be patient and not demand that the drugs be used for general treatment of arthritis or other conditions at this time. The councils defined the principal lines of research as an effort to discover how the drugs can be made cheaply and in quantity; how the undesirable or even dangerous side-effects may be prevented; the full range of diseases in which their use represents a real advance over present methods of treatment; and why and how the curative action of the drugs takes place in the human body.

"The councils praised the private manufacturers who have spent millions of dollars to develop these new drugs," said Dr. Scheele, "and who, up until recently, have made them available to scientists without cost. The financial burden on these private concerns has become so great that they are now compelled to charge the cost of production. In the opinion of the councils, the most important single medical problem facing the country today is how to insure that the drugs will continue to be available to qualified research workers. If this is not done, the full benefit to humanity of one of the greatest developments in medical history will be delayed for several years.

"The councils, therefore, urged that research be expanded by hospitals, medical schools, universities, and by both public and private research laboratories. However, the group emphasized that this expanded research in hormonal compounds should be 'additive.' In other words, that it should not be at the expense of other important types of medical research in such fields as cancer, heart disease, infantile paralysis, and so forth.

"In order that the research involving ACTH, cortisone and related compounds may proceed with maximum speed and effectiveness, the councils felt that a program to correlate the numerous projects of governmental and private institutions was needed. The councils recommended that the Public Health Service take the responsibility for promoting regular and frequent dissemination to scientists, private physicians and the general public of accurate information about the nationwide research effort. This should be done in cooperation with the various scientific and medical societies most directly concerned."

HEALTH INFORMATION FOUNDATION

THOSE IN THE PHOTO ARE (LEFT TO RIGHT) DR. E. L. NEWCOMB, DR. FREDERICK J. CULLEN, ADMIRAL WILLIAM H. P. BLANDY, JOHN G. SEARLE, JAMES HILL, JR., S. B. PENICK, SR., AND WALTON M. WHEELER, JR.

AN ORGANIZATION devoted to the betterment of the health of the nation by means of a continuing study of the nation's health facilities was launched early last month under the name of the Health Information Foundation. The Foundation is being financed by members of the pharmaceutical, drug and allied industries all of whom have a special interest in health since health is their business. Chairman of the Board of the Foundation is John G. Searle, president of G. D. Searle & Co., Chicago, Admiral William H. P. Blandy, who was in charge of atomic bomb tests at Bikini, and who recently retired from the position of Commander-in-Chief of the Atlantic Fleet, has been retained as president of the organization. He will be the active full-time executive director of the Foundation.

Other officers and directors are: Vice-presidents, James Hill, Jr., Sterling Drug, Inc., New York, and Franklyn Bliss Snyder, president-emeritus, Northwestern University; Secretary, Dr. Frederick J. Cullen, Proprietary Association of America, Washington; Treasurer, S. B. Penick Sr., S. B. Penick & Co., New York. Additional directors: John H. Clough, General Electric X-ray Co., Milwaukee, Wis.; John W. Dargavel National Association of Retail Druggists, Chicago; W. L. Dempsey, Sharp & Dohme, Philadelphia; Howard B. Fonda, Burroughs, Wellcome & Co., Tuckahoe, N. Y.; Henry Griswold, Walgreen Company, Chicago; M. J. Julian, Better Vision Institute, New York; James

J. Kerrigan, Merck & Co., Rahway, N. J.; Foster McGaw, American Hospital Supply Co., Evanston, Ill.; Dr. E. L. Newcomb, National Wholesale Druggists Association, New York; Normal Pritchard, Montgomery, Hart, Pritchard & Herriott, Chicago; Earl S. Retter, Eli Lilly & Co., Indianapolis; George F. Smith, Johnson & Johnson, New Brunswick, N. J.; Faus F. Solon, Owens-Illinois Glass Co., Toledo; Dr. Robert L. Swain, Topics Publishing Co., New York; Fred Truitt, Southwestern Drug Corporation, Dallas.

The sole purpose of the Foundation is the improvement of the nation's health facilities through the development and dissemination of factual information about them. "The Foundation has a constructive purpose," states Mr. Searle, "and is not opposed to anything but poor health. It will seek to 'encourage the mass distribution of all health facilities,'" Mr. Searle added, "by finding out where they are needed and what can be done to distribute them efficiently." He emphasized that the Foundation will deal only in facts and that its charter prohibits it from "engaging in lobbying or in propaganda activities."

Mr. Searle explained that the pharmaceutical, drug and allied industries are financing the Foundation because "they have a special interest in health" and no other industry is in a better position to undertake the task. "These industries have played an important part in the development of this country's health resources," he said, "they have participated in the rise of our health standards and they are keenly interested, if only from a business point of view, in seeing that rate of progress maintained and, if possible, increased.

"They have a twofold reason for this interest. In the first place, we of the drug and allied industries are citizens. We want the best of health for ourselves, for our families and for the less fortunate. Therefore, as citizens, we want everyone to have the very finest of health facilities available to them, both professionally and financially. Secondly, we have seen our industry grow at a rate commensurate with the growth of the nation's health standards. For reasons which may be described as enlightened self-interest, we want the best of health for everyone."

Admiral Blandy, outlining specific projects which the Foundation will undertake, said that one of its first operations will be "an inventory of available factual data on the nation's health facilities," especially in relation to population and its distribution. "While this study is being made," he said, "another Foundation project will be special studies of 'marginal' areas—areas where there is reason to believe that health facilities are not as fully available to the people as we all would like to have them.

"Another of the Foundation's important tasks will be the conducting of pilot surveys of local health facilities. These will be made in a few typical areas and will serve as patterns by which communities may evaluate their own health situations and improve them where necessary."

There are no restrictions placed upon the membership of the Foundation. Anyone interested in its aims, whether or not they are connected with the industries now constituting the membership of the Foundation, is welcome to join and contribute to the maintenance of the work undertaken. When the formation of the Foundation was originally conceived, about a year ago, it was hoped that groups outside those directly engaged in businesses directly pertaining to the maintenance of health might be induced to join in this effort through which the health of the people of the nation would be improved. However, it was later determined that in order to accomplish this end, too much education was necessary. Therefore, it was decided to get the project under way with the aid of those directly interested in the development and success of such a project. It is hoped that these others will see the wisdom of aiding the maintenance and further expansion of the enterprise as the activities of the Foundation take shape and the beneficial effects of the work of the Foundation are recognized.

The Foundation has no connection with the American Medical Association or any other organization. However, it will seek the cooperation of all such organizations and of Government agencies, such as the U. S. Public Health Service and others, in developing facts concerning the health facilities of the nation. Officials of the Foundation feel that there are many statistics pertaining to health facilities which are fallacious. Different figures concerning the same thing come from the same sources. The Foundation will seek to determine the correct figures.

Hospitals, clinics, doctors, dentists, nurses, pharmacists, educational and training facilities for these professional people, sources of drugs and therapeutic and other equipment for the maintenance of health, welfare provisions for medical treatment, the number of people covered by hospital insurance of one kind or another and the adequacy of such protection, the number of people covered by insurance of one sort or another for medical treatment, surgery, etc.—these and many other things constitute studies which will come within the scope of the activities of the Foundation. Ways and means of bringing the best in medical facilities of all kinds within reach of the citizens of this country, no matter where they are located, is the work of the Foundation. In other words, the Foundation, through its surveys and studies, will be able to indicate to the people of the country how they can steadily improve their health facilities in a sound progressive way. Such a program, it is felt, should result in constant improvement until our health facilities to meet all sorts of conditions will be completely adequate. Those supporting the Foundation feel that they have supplied their products in adequate supply, and they hope to be able to have all other parts of the health facilities of the nation become adequate for the country's needs.

These things are to be accomplished by studies and surveys indicating the existing needs. As Admiral Blandy stated, "Until the Ginsberg survey (compiled

(Continued on page 318)

NAIL ENAMEL—

THE color cosmetic phase of the cosmetic industry represents the greatest percentage both in relation to unit sales and dollar value. Unfortunately, for reasons unknown, very few of the color cosmetic packagers have given proper consideration to manicure preparations. As a result of the lack of foresight and initiative by the greater part of the industry, the nail enamel business has become highly specialized and is dominated by a few brand names.

As a rude awakening to packagers of other color cosmetic items who have shunted aside nail enamel, we must point out the fact that the few dominant brand names in nail enamel have ventured into other phases of the color cosmetic industry and gained positions of envy and in some instances now lead the field in these other preparations. They are aggressive merchandisers ever sensitive to the trend. The reasons for their success are very obvious. Women today are demanding color harmony, fashions in dress call for color harmony in makeup, and the desire to flatter one's complexion necessitates harmonized makeup. These significant facts point up the necessity for all color cosmetic companies to give nail makeup its due consideration.

It has been noted that from time to time some of the leading cosmetic houses have made half-hearted ventures into the nail lacquer business. Their failures can be traced to several factors. On many occasions they did not create a package which could arouse consumer interest. They felt that the brand name which they had established for other preparations carried sufficient weight to effect the sale of their nail enamel package. They have proven to themselves the fallacy of such thinking.

In other instances, packages were created that had definite appeal; however, mechanically and functionally they had drawbacks and as a result eventually passed out of existence. In still other instances, packages were created that had all the desirable attributes, but poor merchandise planning and insufficient knowledge of packaging eventually proved to be their downfall.

Package presentations that represent departures from competitive brands arouse consumer interest. In considering same, one must be sure that the final presentation is mechanically and functionally infinite in perfection. The presentation must afford to the consumer an ease of application, the bottles must be of such design as to flatter the contents and permit the use of a brush that will be of the most desirable over-all length. Each of the component parts of the package must represent perfection both in relation to design and adaptability to nail enamel. Various cautionary factors have been clearly noted in various articles that have appeared in the past in this journal.

The next important factor a nail enamel presentation should possess is the fact that the shades in themselves represent a cross-section of colors that would appeal to the women and flatter their hand complexion. The correct pink lipstick must flatter milady's facial complexion and by the same token, the correct pink nail enamel should flatter her hand complexion, harmonize with the pink lipstick and be a wearable, acceptable color. While the question of choosing desirable colors may appear difficult, a careful study of the various lines of nail enamel now marketed could give to the new interested packager all the necessary information that would insure him of a good color selection.

As an example of good package development on the part of a cosmetic distributor, we are now seeing the introduction into the syndicate channels of one of the smartest packages ever developed for this avenue of distribution. The package in itself takes into consideration all the cautionary factors connected with the packaging of nail enamel and is topped by a feathered plume which is the clue to the over-all promotional aspects of the presentation. In commenting on the shade selection, it can be said that the twelve colors in the line represent a cross-section of the most popular nail enamel shades now in vogue. Counter-tests on the pulling power of the package have already proven the fact that initial sales can be effected by package appeal. Those chain stores that conducted the tests reported that this package when displayed side by side with other syndicate nail enamels with no favored position given to any, outsold all others. Given continued proper

KEY TO COLOR AND FASHION

merchandising efforts, there is no question that this new syndicate adaptation is destined to become one of the best known amongst the lower priced cosmetic lines.

This same type of aggressive thinking can certainly be applied to the adoption of a nail makeup line by the class cosmetic companies who now lack such preparations in their setup. Aggressive thinking in creating nail makeup does not necessarily limit one to a line of nail enamel filled in the customary bottles.

A great deal of laboratory work has already been done on a solid type nail makeup. The various shades are offered in a dry solid form with a bottle of diluent attached to which is the standard cap and brush. By applying a few drops of the diluent to the solid mass, one is able to liquify same and pick up on the brush, in a similar manner as an artist picks up color from his palette, sufficient colorant to effect a smooth, even manicure to the nails. The theory behind this development is the fact that liquid nail enamels have a tendency to deteriorate with age, whereas the solid nail makeup remains stable regardless of age. Another important feature of this type product is the fact that there is no change in color as a result of precipitation which normally takes place in the liquid product.

Another radical departure is the development of the fountain pen application for lacquer. In this instance nail enamel flows either by capillary action or by a pumping action through a small orifice onto a brush which is the conveying agent affixed to the barrel of the pen. This type application while still in its infancy from a point of development, can someday replace the standard bottle of nail enamel. These departures in manicure presentations offer tremendous possibilities to cosmetic packagers.

It might also be said that by no means have we exhausted the various effects one can obtain on the nails. For the extreme high-fashion look, or for milady's special occasion work has been done on the application of sequins or flitters over a wet coat of lacquer. The resultant finish imparts to the nails the appearance of a glittering Christmas tree ball. While this in itself might appear to be a radical effect for the nails, it can certainly lend a tremendous amount of prestige to any line adopting same.

We have also noted that there is continuous research work on product improvement on the nail enamels as we know them today. In this direction we have seen the development of base coats which tend to extend the normal wearing qualities of nail enamel. We have also seen a great deal of clinical study on the subject of nail enamel. As a result of these studies it can be said that today's nail enamels can be classified with that group of cosmetics to which consumers are least sensitive.

Aggressive thinking and foresight by that part of the industry who up until now have considered nail polish as a "stepchild" would definitely diversity the industry to the extent that every color cosmetic company could include in its line of cosmetics a line of manicure preparations and reap from same its deserving share of the evergrowing manicure preparation business, plus that additional share of business on its other preparations which it is now losing because of its failure to round out their color line of cosmetics by adopting nail enamel.

MANUFACTURE OF TABLETS

By Ronald Clarkson

Mr. Clarkson, a consultant on tablet manufacture not only in the pharmaceutical field, but also in the chemical, plastic, candy, ceramic and other fields, studied pharmacy in England, and after coming to this country studied at Temple University, Philadelphia. Following periods of employment at Sharp & Dohme, Wyeth, Inc., and the National Drug Company, Mr. Clarkson, in 1935, became director of the laboratory division of the F. J. Stokes Machine Company, working on development of all types of pharmaceutical tablets and instructing new customers in various intricacies of making and coating tablets.

Mr. Clarkson is co-author of the book, Manufacture of Compressed Tablets, published in 1944, and author of several papers on tabletting technique and allied problems. He is also the author of an article on tablet coating, and is a specialist in this phase of tablet finishing, having trained many people in the art of tablet coating.

PART 1 — MANUFACTURING OPERATIONS

THE number of compressed tablets produced by the pharmaceutical industry has reached astronomical figures. The old established companies are continually expanding their production and new companies are starting in production every month.

The yearly production for the United States alone runs into many billions, just how many I do not know, but it is terrific and why might I ask. My personal opinion is that tablets provide a most acceptable means of medication—when a physician writes a prescription for tablets or dispenses them himself, as so many do these days, he has a reasonable assurance that they will be taken according to his directions. I know many people who have started out religiously on a liquid prescription to take a teaspoonful before or after meals with water, etc. as the case may be, and find out later that they forgot half the time, because they were away from home or didn't have water handy and all sorts of excuses. I have done it myself on numerous occasions. Many physicians, mine and yours, will vouch for it.

In the first place liquid preparations are bulky—they can be squeezed into that wonder of our times the female pocketbook, but what about the poor male. A four or six ounce bottle makes an ominous bulge in his pocket. If he or she carries the bottle to the office, unless they take a teaspoon along to prove that it is a medicine, they can be accused good naturedly, of course, of taking a snifter during working hours.

Quite often liquid preparations are not the most pleasant tasting. Of course, there are misconceptions that the worse it tastes the faster it will cure.

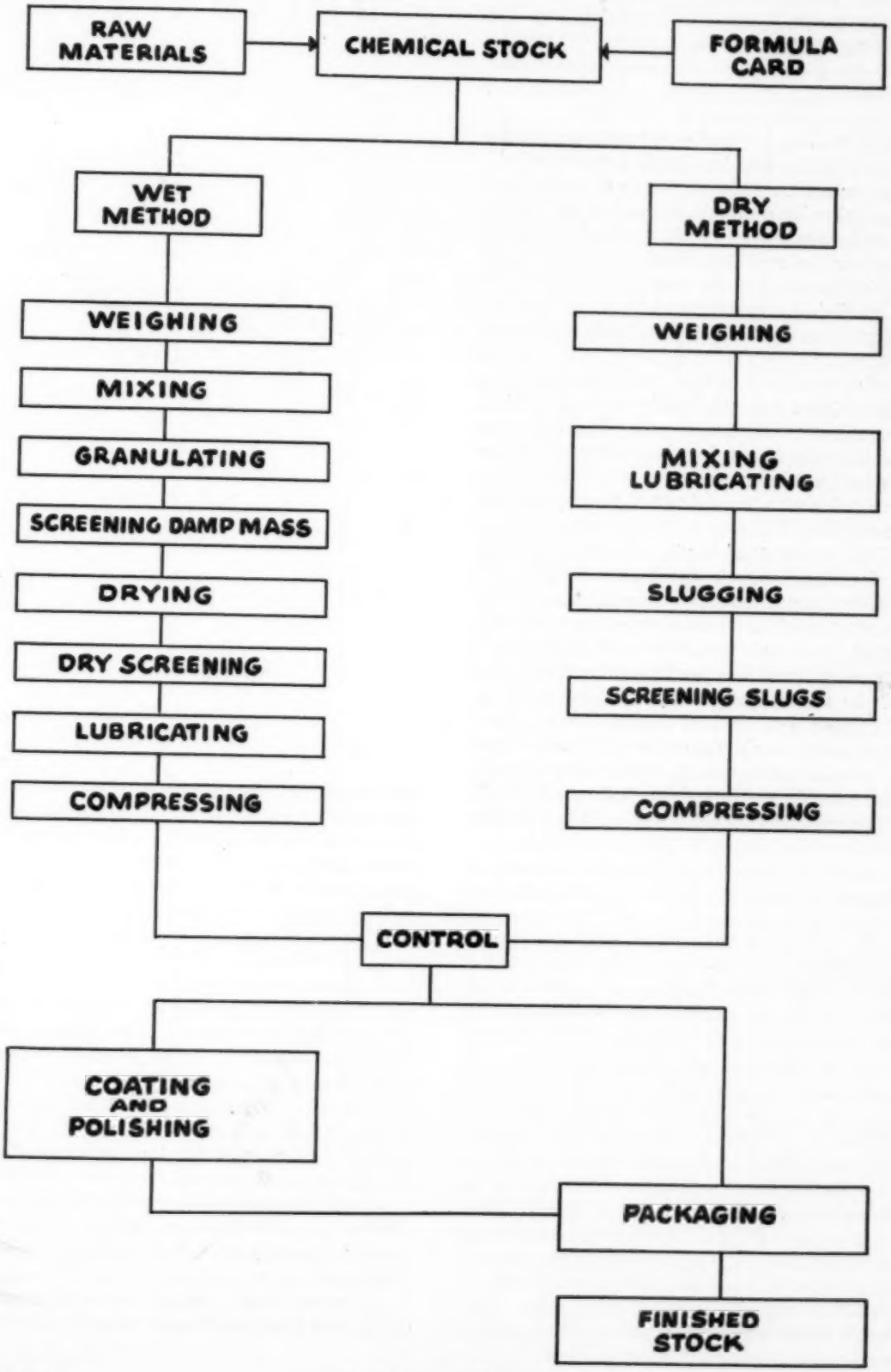
With tablets there is quite a difference. A weeks' supply usually requires only a small container or vial, which can very easily be carried around at all times—one or two slipped into the mouth, a drink of water and the deed is done. If the ingredients possess a disagreeable taste they can very easily be masked by sugar coating and the beautiful colors produced today make them a joy to take.

One of the most important advantages of compressed tablets is that they provide uniform dosage, providing they are manufactured with a degree of accuracy and rigid control.

Many people still refer to compressed tablets as pills, which is incorrect and I am constantly trying to explain

(Continued on page 351)

FLOW CHART


RAW MATERIALS
CHEMICAL STOCK
FORMULA CARD
WET METHOD
DRY METHOD
WEIGHING
MIXING
GRANULATING
SCREENING DAMP MASS
DRYING
DRY SCREENING
LUBRICATING
COMPRESSING
WEIGHING
MIXING LUBRICATING
SLUGGING
SCREENING SLUGS
COMPRESSING
CONTROL
COATING AND POLISHING
PACKAGING
FINISHED STOCK

SALES VERSUS

FIRST, let's define our terms. When I refer to research, it is my intent to include broadly the technological and scientific phases of the operations of a drug company. I believe that for the purposes of this discussion research should be subdivided into the purely developmental and basic phases. Developmental research is that phase concerned with pharmaceutical angles . . . new twists on old products . . . modifications of recommended dosage forms . . . new tastes and odors . . . new bases for ointments and creams . . . new combinations of old and well-known chemicals.

By basic research, we mean to imply the creation of new drugs either by synthesis, extraction and identification, or by application of chemicals never before used in the world of medicine. Clinical research should come within the sphere of research as a general term. Specifically, clinical research would be subdivided into clinical developmental research and basic clinical research.

In referring to sales, I include not only sales proper but also the adjuncts thereof. This includes advertising, publicity, public relations and such other means of promotion as may be employed to bring about the acceptance and use by the customer.

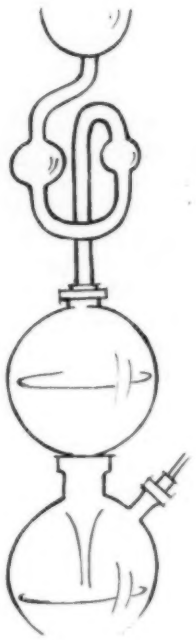
The term influence as applied to this discussion should include both direct influence as openly manifested and indirect influence as exerted via susceptible management personnel. Influence of sales on research and vice versa can be domestic and external. Sales profits by the reputation of its research department; research is influenced by sales via numerous external media.

Development should be a joint operation of sales and research. In the interests of the company, modifications of existing products and the marketing of new twist items is logically a matter for joint cooperative effort. The sales department should know what is selling, for example, the B complex elixir needs 4 milligrams of thiamine instead of 3; B^{12} should be added to the multivitamin tablet, etc. The natural instinct of sales is toward the dollar today as during the current year; the natural inclination of research is the long range planning of programs, ultimate product structure and building the prestige of the company through such a product structure. The short range angles should be conceded to sales within the sphere of pharmaceutical possibility. By this is meant that the sales department should be restrained if they want 2 grams of ascorbic acid in 1 ml. of solution of make illogical demands.

We do have an example of a line of products, purely developmental, a sales department pressure line, that has backfired. I refer to the antihistamines as cures for colds. No one will argue the merits of these products as sales producing items. But let us look at the long range consequence. The medical world and the drug industry are fighting socialized medicine; we are fighting government control. Then the industry invites trouble by marketing items over the counter which have the nearly uniform opposition of the physicians. The physician is a powerful voice in the world of politics and he is heard in the halls of congress. This time his voice is so loud that the Food and Drug Administration will probably receive additional powers requiring the demonstration of efficacy as well as non-toxicity for product approval. The issuance of a law requiring the demonstration of product efficacy will make the marketing of new products extremely difficult. Most individuals would favor the necessity of the demonstration of product efficacy; research would favor such legislation within limits; sales certainly would not. Even research would fear the probable lack of establishment of proper limits over such legislated powers. Here, I feel is a point at which the immediate desires of sales and the long range interests of the drug industry come into conflict. The old adage "Look before you leap" is sound. The industry got a black eye out of the cold cures and the politicians got a weapon in the promotion of socialization of medicine. Even if the future demonstrates a degree of efficacy for these remedies the damage is already done. So it would seem that a larger voice should be granted research even in the decisions concerning developmental items. I do not imply that all sales organizations sought over-the-counter cold tablets, but I feel that it is fair to say that most of them did.

RESEARCH

*By Gustav J. Martin**



I repeat that the current political pressure for socialized medicine makes all the more important the necessity that the drug industry recognize its responsibility. The contribution of the drug industry lies largely in its research and if this is to be continually counterbalanced by hasty marketing projects based upon the desire of sales departments for immediate dollar volume, then the road to government control and to socialized medicine is open.

Let us emphasize and reemphasize that we are discussing generalities and not individual organizations. Many sales departments have the maturity necessary for long range planning but the majority do not and it is the cross section with which we are dealing.

Sales should not have a voice in basic research. The training of sales force personnel is such as to make them incapable of understanding the complexities of research. When any one of us devotes a lifetime to a research problem, we know perfectly well how little we know. When a salesman devotes his idle moments to keeping up on science via the pages of the newspapers and magazines, he feels that he possesses a comprehensive knowledge of science in its broadest aspects. Sales is a full time job and research is also a full time job. Basic research is a sphere requiring every facet of training and background and even of scientific intuition. Sales will pull out that old chestnut to the effect that research men do not know whether a given product will sell. This is hogwash. A product's potential sales volume in a given sphere depends upon the merit of the product, upon the sphere of application and finally upon the efforts of the sales department. Obviously, research will not know the merit of the product until it is produced, but research will know the sphere of application better than sales could possibly know it. The suggestion of the sales department is that research, unguided by sales, comes up with a cure for a disease which seriously affects Eskimos with pink eyes and six toes on the left foot. This is nonsense. Research, not sales departments, compile the statistics on disease incidence. Once this is done, anyone who can read can estimate the potential market. Actually once the merit of the product is established and the potential market determined, then and only then should the sales department be brought into the picture and challenged to develop that market.

Sales managers have the unfortunate habit of saying "Give us a product which will cure Parkinsonism and you will have done something." This is the equivalent of research saying "Take our new developmental item which is similar to that of nineteen other competitive products and run it into a five million dollar product and you will have done something." This tendency on the part of sales is one research must ignore. I think we should all face facts and those facts must be extended beyond the confines of the company, beyond management to the responsibilities we all bear for the future of medicine and the future of the drug industry in the United States. The accomplishment of this task lies in informing the public of the active contribution of pharmaceutical industry and of medicine. Those contributions come in narrowing margins of profit, basic research, reducing wherever possible multiplicity of identical items, bringing down costs of drugs and above all else never marketing an item for the profit motive alone. If the drug industry can and will come to bear its responsibility by marketing only items which are a contribution to the practice of medicine, then and only then can they guarantee themselves a logical and quitable profit in the future. If this is not done, the government and the politician will take over, socialized medicine will become a reality, and research, sales and management will be puppets dancing to a tune piped from Washington.

Thus, as far as internal or domestic influence goes, I feel that research and sales should jointly and cooperatively determine the developmental research course. Basic research should be a function of the research group alone.

External factors should be joint rather than unilateral as they currently are. Sales and research should jointly determine publicity angles. I am confident that no reputable research group would ever foster publicity

(Continued on page 319)

*Director of Research, The National Drug Co., Phila. Pa.

PLASTIC PACKAGES

By Harry Hilfer

TOO often package designs for new products have been developed purely on an aesthetic basis with little thought given to methods of enhancing the convenience of the contents insofar as usage is concerned. This may be true because the packaging media have been rather limited in their scope and the products therefore would have to be altered slightly in viscosity, for example, to fit the package. There recently has been introduced a plastic bottle, which is capable of use with liquid preparations of various viscosities, but where formulation of the contents should be altered to fit the new medium.

Until recently containers for liquid preparations have been limited almost entirely to glass. This choice, everything considered, is the best that could have been made because it is among the most stable chemically of any of the substances available and because the contents of the container readily could be observed. However, the big flaw in the use of glass lies in its inherent brittleness and lack of resistance to shock. Since many of the preparations packaged are used in the bathroom, and under the moist conditions from the standpoint of the tendency of the container to slip from one's grasp, this inherent weakness of glass becomes magnified to greater proportious than it would at the outset. Much too often when Mr. Average Man or Woman wakens in the morning after a "big night" without the normal amount of sleep, the morning "toilette" will be marred by a pile of shattered glass and hair grooming on the tiled bathroom floor. Substitution of non-breakable containers for this reason alone would make grooming more convenient.

An added advantage in the use of the soft plastic container lies in the fact that the flow of the contents may be controlled by the amount of pressure exerted on the container without any of the usual danger of loss of the contents through accidental tipping. Since the control of flow is dependent on pressure application, the aperture may be varied in diameter to fit the viscosity of the contained preparation. A further innovation lies in the adaptability of this type of container to use as an atomizer by the incorporation of a tube extending from the opening to the bottom of the vessel. Application of pressure to the container would cause the liquid to be forced up the tube and through the opening which if small enough would cause the liquid to be ejected as a spray.

The plastic material in greatest use as a container for liquids is made of polyethylene. This, as the name indicates, is a high molecular weight polymer of ethylene which the manufacturers claim is insoluble in any solvent at room temperature. Its stability against solvents, however, does not necessarily fit it as a container for all substances. Mineral oil, for example, while it would not necessarily dissolve polyethylene, could possibly leak through it because there is a tendency for the container to absorb it. The behavior of the polymer should therefore be tested against the material it is supposed to hold.

In a discussion of the different types of preparations which could be packaged in a plastic container, if any alterations would have to be made, we would have to consider what effects such a change would have on the efficacy of the product. Since the imprint of the plastic bottle was first noticed in its introduction as a container

for a liquid antiperspirants, the relative merits of the liquid and cream antiperspirants should be compared. The efficacy of such preparations are dependent on the incorporation of aluminum salts, which are responsible for their antiperspirant activity. They also contain buffering agents which bring the pH of that medium within a range which would not endanger fabrics which come in contact with it. In any case both the salts and the buffers must be in complete solution if they are to perform their functions properly. Their efficiency therefore would not be impaired if they were incorporated in an essentially aqueous solution, rather than emulsion. It may be argued that hydrolysis occurring in aqueous solutions may cause the formation of insoluble aluminum hydroxide, but this tendency could be overcome by the addition of enough alcohol to lower the hydrolysis to a point where precipitation would not take place. There are actually some features about the solution which make it preferable to the cream.

The cream has a bad tendency towards drying through loss of water when the jar cover is removed for any length of time, which would not be true of the liquid because the smaller aperture through which evaporation could take place. There were objections to the liquid as well, based primarily on inconvenience of application. Its presentation in the plastic container, however, obviated this inconvenience since the solution now may be sprayed on without consequent dripping.

The plastic bottle is now being utilized as a container for a baby skin lotion. This product but recently has reached the market so its reception cannot be gauged too accurately. However, it certainly seems to have several features about it which would enhance the preparation from the standpoint of convenience of its use. Application of anything to a squirming, kicking infant is rather a hazardous proceeding, since the container could be kicked from the mother's grasp or otherwise damaged. Under the best circumstances, allowing the needed quantity to flow from the bottle would be difficult because of the pressure brought by the baby who is usually voicing his dislike of the undignified position he has been subjected to. Application of the lotion by pressure without the immediate necessity of replacing the cap seems to be a more convenient method.

The product's formulation seems to have been thought out carefully. It is of a rather heavy viscosity and therefore does not flow from the aperture when the container is inverted, except by pressure. It is not meant to be sprayed and therefore there is no provision for spraying included in the container.

Many of the preparations (the author has no idea of the constituents of the product referred to) contain sizable quantities of mineral oil and therefore may not easily be held by the container. However, the incorporation of mineral oil in a stable oil-in-water emulsion need not be regarded as a prohibition against the plastic container, since the mineral oil would not be in contact with the vessel. I have tested several such emulsions against polyethylene and found them to have no effect on it. This, of course, is not true of the water-in-oil type of emulsion.

The same idea may be utilized in hand lotions to great advantage. Too often an otherwise good product may increase in viscosity on standing to a point where it no longer can flow easily from the bottle. This rise in viscosity may be due to a lowered temperature or to other conditions not readily under the manufacturer's control. Such differences in viscosity will not effect the ease with which it could be dispensed by the "squeeze" bottle. To this may be added the potent factor of evaporation loss, which is minimized by the smaller aperture in the plastic container.

Hair preparations, such as hair groomings, may be treated similarly. These may be formulated as either sprays or emulsions of higher viscosities. The advantage of their being packaged in the plastic container lies in greater ease of application under adverse conditions. Handling any container with wet hands is rather hazardous, but the danger of breakage due to dropping the container is obviated completely by the use of a nonbreakable plastic. Here again caution should be exercised to assure the suitability of polyethylene as a packaging material against the product used.

In addition to its use as a dispenser of antiperspirant preparations, the plastic bottle also may be used as containers for the popular deodorant colognes. This preparation may be sprayed conveniently on the skin as well as rubbed on with as good effect.

Men's after-shaving lotions also fall into this category since the usual glass bottles are rather inconvenient to use by comparison.

Shampoos either in emulsion form or as solutions would seem to lend themselves towards this type of packaging. If a child's hair is being shampooed, the

(Continued on page 359)

AMINOPHYLLINE

By Milton A. Lesser

IF THE number of its distributors is any index, aminophylline can be rated as a very popular drug. As a matter of fact, aminophylline is a valuable member of the medical armamentarium. In addition to providing diuretic and myocardial stimulating actions, aminophylline is also employed for its bronchial relaxant and antiasthmatic effects.

Also known as theophylline with ethylenedramine or theophylline ethylediamine, aminophylline U.S.P. is a member of the important group of drugs known as the xanthines. This group also includes caffeine, theobromine and theophylline. These all resemble each other in most points of their pharmacological action, but are said[1] to differ markedly in the relative intensity of their actions on various functions. Thus, while caffeine is the most potent nervous stimulant, theobromine exerts the greatest action on the muscles. Theophylline, however, is the most effective diuretic and coronary dilator of the group.

Chemically aminophylline may be described as the double salt of theophylline (a crystalline alkaloid obtained from tea leaves) and ethylenediamine. According to U.S.P. XIII, aminophylline contains not less than 75 per cent and not more than 82 per cent of anhydrous theophylline and not less than 12.3 per cent and not more than 13.8 per cent of ethylenediamine. Available as a white powder, aminophylline has a slight ammoniacal odor and a bitter taste. It is relatively stable in air but has a tendency to gradually absorb carbon dioxide from the atmosphere with the concurrent liberation of theophylline. For this reason, solutions of aminophylline may become turbid on standing. Aqueous solutions of the drug are alkaline to litmus and aminophylline shows the usual incompatibilities of alkalies.

Pharmacologically speaking, theophylline is the active portion of the aminophylline molecule. Hence aminophylline shares the action and uses of other theophylline compounds.[2] Aminophylline, however, shows a number of superiorities over the parent drug and therefore finds a wider therapeutic utilization. In the main, these advantages are attributable to the greater solubility of aminophylline. Because of this property, which allows more rapid absorption, aminophylline produces faster, more efficient physiological effects.

Aminophylline provides a number of therapeutically important effects. For example, it exerts a stimulating effect on the central nervous system, facilitating respiratory function. The drug relaxes the constriction of certain smooth muscle structure, particularly those surrounding the bronchi. It reduces venous and intrathecal pressure. This agent stimulates the myocardium with a resulting increase in the rate, amplitude and force of cardiac contractions, but without increasing the size of the heart. Through the interaction of several factors, aminophylline also efficiently promotes diuresis.

Although aminophylline is generally considered to be a safe drug, there is an element of danger in its use, especially when given intravenously. Reactions, which are generally neither alarming nor lasting, have been

noted with intravenous aminophylline. They usually consist of tachycardia, flushing of the face, sweating, sometimes nausea and vomiting, burning sensation of the eyes and a metallic taste.[3,4] Waldbott,[5] in discussing the treatment of asthmatic seizures, says that with at least 20,000 injections he has never seen any "serious ill effect" from the use of aminophylline.

Nonetheless, fatalities following the intravenous administration of aminophylline have been reported by Merrill[6] and, more recently, by Bresmick and his associates.[7] In a consideration of the earlier report, Unger[8,9] agreed that the intravenous use of aminophylline in acute cardiac conditions is dangerous. However, he felt that Merrill was probably incorrect when he suggested that the drug may cause death in bronchial asthma. Unger noted that when the drug is injected in patients with this condition prompt relief is usually obtained and no harm results.

Aminophylline may be administered orally, intravenously, intramuscularly, rectally and, in newer procedures, by inhalation. For these routes the drug is prepared in tablets, capsules, ampoules and suppositories. Inhalable dusts and aerosols are also used. Standards for the official aminophylline solution for parenteral administration are given in the U.S.P., but solutions of various strengths are available commercially for injection. A description of aminophylline tablets is also provided in the official text. It should be noted in this connection that oral administration is considered to be the least effective route and that enteric-coated tablets are usually employed to avoid possible gastrointestinal irritation.

In many preparations, aminophylline is used in admixture with other drugs. For example, combinations of aminophylline with barbiturates are sold by a number of drug houses. One organization, which is intimately associated with the development and use of this agent, provides a series of tablets containing aminophylline and phenobarbital in various proportions.[10] This company also makes aminophylline suppositories containing pentobarbital sodium for use where a more prolonged action is desired. Other products sold under the same label contain aminophylline and potassium iodide, with or without phenobarbital.

At least two manufacturers have marketed tablets containing aminophylline, rutin and phenobarbital for use in diseases in which abnormal capillary fragility is a potential danger or when such increased fragility is a complicating hazard in connection with the use of certain drugs. Intended rather specifically for the treatment of bronchial asthma and hay fever, another product contains a mixture of aminophylline, racephedrine and phenobarbital. With similar indications, a recently developed product, which has been discussed by Unger and Gordon,[11] comprises tablets made with aminophylline and a potent antihistaminic drug as the active agents.

The treatment of bronchial asthma comprises one of the most important indications for the use of aminophylline. As remarked by Boger[12] in his critical and frequently cited study, the clinical usefulness of the drug in the treatment of bronchial asthma has been confirmed by a number of physicians whose opinions have not found their way into the literature. However, there are many published reports which attest the advantages of this agent. Thus, Mountain[13] has remarked that aminophylline acts by relaxing the bronchial muscles and that it has taken a definite place in the armamentarium of asthmatic medication. He also notes that it is extremely valuable in relieving patients of an epinephrine fastness and is less contraindicated in cases with cardiac disorders or hypertension.

Also very indicative is the statement appearing in "New and Nonofficial Remedies."[2] Here it is said that aminophylline is useful "for the treatment of paroxysms of bronchial asthma or status asthmaticus. It is primarily useful in asthma that is refractory to epinephrine and is considered safer than epinephrine for paroxysmal dyspnea in which the 'bronchial' or 'cardiac nature of the attack has not been determined."

When treating bronchial asthma with aminophylline, physicians take advantage of the fact that the drug can be administered by various routes and in combination with other therapeutic agents. A number of observers[14,15] are of the opinion that orally administered aminophylline is capable of controlling recurring mild or moderate asthmatic attacks. For preventing recurrent attacks, Goodman[16] has suggested that tablets containing 0.1 Gm. of the drug may be given three times daily and at betdime. Others[17] have said that the oral administration of aminophylline can be used to augment the dose given intravenously.

In a high proportion of cases of bronchial asthma, the benefits of aminophylline are obtained through intravenous administration. Voicing the view that the oral administration of the drug is of questionable value, Rackemann[18] has said that aminophylline is used intravenously with good effect in asthma. Severe and dangerous reactions from its use has not been observed in his work.

Also indicative is the recent discussion by Hyman[19] on the treatment of severe asthmatic attacks. It is in such cases that the intravenous administration of aminophylline finds its greatest usefulness. He finds that a 10 cc. solution containing 250 mg. of the drug, given slowly, often produces a dramatic response. Dyspnea eases rapidly, the respiratory rate becomes almost normal, the color improves and, in general, the patient is much more comfortable.

Also noteworthy is the view expressed by Unger[20] in his report on the diagnosis and management of bronchial asthma. Aminophylline, says he, gives better results than does epinephrine when administered intravenously in adults. In hospital work he administers the drug in glucose solution; the infusion giving on at the rate of 60 drops per minute. Recently, he and his associates have introduced a continuous method of administering aminophylline. Good results have been obtained in

(Continued on page 340)

The Sales Importance of

NEW PRODUCTS

*By Bernard Jeffs**

THE vitalizing force of new products was never more apparent than today. As a result of two World Wars the center of scientific discovery and invention has shifted from Europe to the United States where the practical application of atomic physics, electronics and chemistry have contributed immeasurably to our safety, health and happiness. In a few decades the practice of medicine has been revolutionized by the introduction of sulfa drugs, the antibiotics and antihistaminics. Discovery has followed discovery so rapidly that 55 per cent of the drugs now in use were unknown 10 years ago. Drug industry sales have increased over a thousand per cent since 1912. "So sensational is progress in this field that the pharmaceutical business may become the largest industry in the United States," stated Dr. Morris Fishbein, before the Pharmaceutical Advertising Club of New York, recently.

To reach the goal visualized by Dr. Fishbein, it will be necessary for the pharmaceutical industry to continue to advance with giant strides. But the goal is attainable. Medical science, in spite of its great accomplishments, is still in its infancy. Diseases of the heart and blood vessels, cancer, nephritis, neuromuscular diseases, and the problems of aging tissues are as challenging an array as any generation of research workers could wish for. And beyond the medical horizon of the twentieth century is the vast province of eubiotic medicine which aims to advance the biological growth, development and well-being of the individual.

The part individual companies will play in this pattern of advancement will depend, in large measure, on ability to obtain an unceasing flow of new products which can be commercialized. The following significant statement is taken from the Abbott Laboratories Annual Report, 1948—

> "Since 1940 over two-thirds of all Abbott's sales have been in products developed since that time. Thus, if it were not for the ever ending search for new and better products Abbott's sales in 1948 would have been approximately twenty million dollars instead of over three times that amount."

New products are playing an equally important part in the business life of E. R. Squibb & Sons. Since 1933, according to the Wall Street Journal, Squibb has introduced over 700 new products which, as of July 1948, accounted for about 75 per cent of current sales; 55 per cent of sales in 1948-49 were in products introduced during the past five years.

Merck & Company, in its 1948 Annual Report to its stockholders, stated the company's research program had played an exceedingly important part in the development of products which accounted for more than 60 per cent of total sales during the year. More than three times as much streptomycin was sold in 1948 as in 1949. Penicillin continued to contribute considerably to the volume of net sales.

So vital is the role of new product development that the coordination of research and sales activities has become one of the most urgent concerns of management.

What is meant by the expression—"a new product?" Simply stated, of course, a new product is one that has not existed before, and in this sense probably more than 90 per cent of new products are not new drugs. The most significant trend is the development of new combinations of drugs already in use. In this discussion the expression "new product" applies equally to new drugs and to reformulation of known drugs. To help clarify the matter I have asked Dr. C. T. Van Meter, research director of Reed & Carnrick, to give us a research man's views. He states—"In the development of new products one type of research is directed toward the discovery of a new synthetic chemical compound which exerts measurable physiological actions which can be used to advantage therapeutically. The several antihistaminics provide examples of this type of effort.

"Research may also be directed toward modifying the action of the main therapeutic ingredient, as for example, by the introduction of auxiliary substances to bring about supplemental physiological action, or to compensate for possible undesirable side reactions. Examples are the various estrogen-barbiturate combinations. Still another research objective is the introduction of an ingredient, or the development of a suitable dosage form, which will protect the main ingredient from destruction before it can be utilized by the body.

*Vice President, Sales and Advertising, Reed & Carnrick, Jersey City 6, N. J.
Presented before A.P.M.A. Meeting, February 15, 1950

Buffered penicillin tablets for oral use, and enteric coated digestant tablets, are examples.

"Finally," states Dr. Van Meter, "there is research directed to the introduction of auxiliary ingredients or the discovery of suitable physical or chemical methods of altering the main ingredients in order to regulate the physical utilization of the drug. Barbiturate mixtures, nonsystemic sulfa drugs, and procaine penicillin are familiar examples."

Reliable data on the total number of new pharmaceuticals introduced by all companies in recent years is not available but advertising in leading drug journals provides a fairly reliable index. A breakdown of advertisements in these publications shows that 90 companies advertised new products in 1948 as compared with 157 companies in 1949—an increase of almost 80 per cent. Even more impressive is the increase in the number of new products advertised. Only 11 new pharmaceuticals made their initial appearance in 1947. The following year the number increased to 27, and a year later, 1949, the figure rose to 117.

An analysis of prescription type products listed in the 1949 quarterly issues of Guttman's "New Modern Drugs" provides another useful index of recent marketing activities. Although not all houses are listed, the study permits us to draw interesting conclusions.

Here are the highlights: total number of new products marketed, 1949—363; total number of firms represented—108. Significantly, 10 firms introduced 43 per cent of the products listed; 54 houses, or exactly one-half of the total number, marketed only 1 product during the year.

Further analysis indicated the fields in which interest was greatest. Vitamin products and antibiotics tied for top place, each with 57 entries. Other listings are sulfa drugs—23; antihistaminics—18; antispasmodics—12. Member firms of our association not sponsoring research directed to the development of entirely new synthetic chemicals and other new therapeutic agents, will be interested that more than 90 per cent of the listed products involved employment of known drugs. Many consisted of a single drug with no distinctive feature (except the trade name), but a larger number consisted of mixtures of known drugs, distinctiveness depending upon the constituents. Less than 10 per cent of the listed products contained new substances.

In relating these figures to the economy of the business we must keep in mind the margin of profit on individual items. There is no magic in numbers if the products introduced do not show a satisfactory margin of profit on sales. Small houses, in particular, should think in terms of the products they can sell at a profit rather than the number they can manufacture. Sales and advertising effort, concentrated on one or two new products each year, permits a better promotional job to be done than is possible when a larger group is promoted. One bell ringer is a more valuable asset than 100 run-of-the-mill products which merely clutter the pages of a catalogue and deflect promotional dollars into a cul de sac.

The amazing success story of G. D. Searle Company illustrates this point. From its founding in 1888 until the early nineteen thirties, Searle was a relatively small pharmaceutical house selling to dispensing physicians. About 1933, management decided to replace the general line of several hundred items with a relatively small group of clinically proven specialties developed in its own laboratories. As a result of this decision Searle's sales grew from $917,000 in 1935 to $11,762,000 in 1949. Today they are manufacturing and selling only 25 products, six of which account for at least 80 per cent of total sales.

Sometimes a little face lifting makes a surprising difference to the appearance of a product in the sales picture. The introduction of higher unitages of old

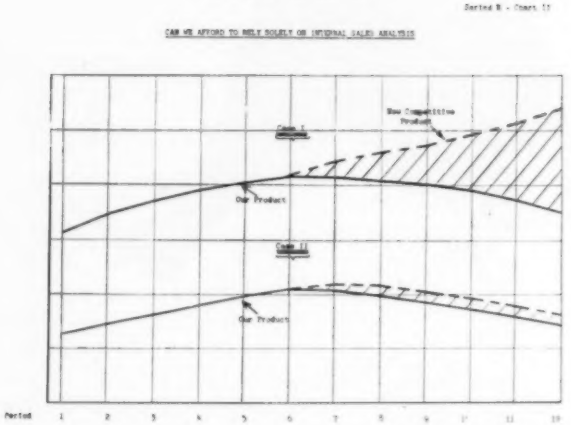
(Continued on page 349)

PHARMACEUTICAL MARKETING

Part 2

By John H. Hawley, Jr.

Chart II, Series B



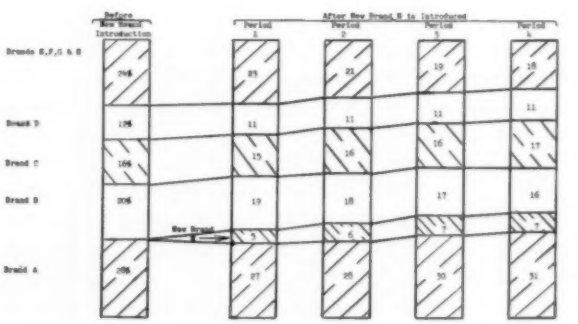
In Case I not only would positive sales action involving a capital risk be indicated, but a realignment of medical research projects might be in order. Case II certainly should cause no great alarm as the over-all trend would be more indicative of a temporary market saturation than any other single conclusion. At the outside the most radical course of action which might be indicated would be an exploration of the indications for the drug so that the development of new uses might replace fractional market losses. And is not this a standard operating procedure which should be carried on in any sales situation?

The above illustrations have not been overdrawn to illustrate a point, yet one seldom encounters so simple a marketing problem in a high volume sales field since such sales areas invite competition. Let us, therefore, look at a hypothetical situation which closely parallels the recent introduction of a new product, Brand "N", in a highly competitive field. It can be said that the product was a worthwhile addition to the physicians' armamentarium, it had sound clinical work to support the introductory promotion and it, therefore, promised to cause more than a "competitive stir" in the market.

As a consequence the manufacturer of Brand "A" was deeply concerned regarding the possible sales implications which might result from the promotion of Brand "N". A series of counter promotions were prepared to soften the impact of the competitive drive but these plans were held in abeyance pending the development of a concrete sales trend for Brand "N".

As a check on sales progress for Brand "N" the prescription survey and actual audits of drug store sales were studied. Prescription ratios, derived from a limited list of stores, showed no consistent Brand "N" demands. Then drug store audits turned up this sales picture.

Chart III, Series B



Column One, on the extreme left, indicates the market composition prior to introduction of Brand "N". It will be seen that Brand "A" had achieved the greatest measure of success in the market. The succeeding four columns measure the new market which was created after the introduction of Brand "N" and its composition in four consecutive bi-monthly periods.

Since it is the custom to sell in direct competition to the sales leader, whether or not that item is named, it is inevitable that the primary drug product in a market becomes high-lighted by a new product. In this case, studies showed that Brand "A", instead of being restricted in sales, moved forward and the new item gained such volume as was realized from a small group of minor products.

The net result of this study was that the manufacturer of Brand "A" was saved the economic loss which would have been incurred had he jumped to the conclusion his markets were endangered and had launched a special promotional drive to save them. More important was the fact that there was no interruption in the continuity of promotional procedures which had achieved Brand "A" dominance in the market.

THE INTERPRETATION AND PRACTICAL USE OF MARKETING RESEARCH DATA IN THE PHARMACEUTICAL INDUSTRY

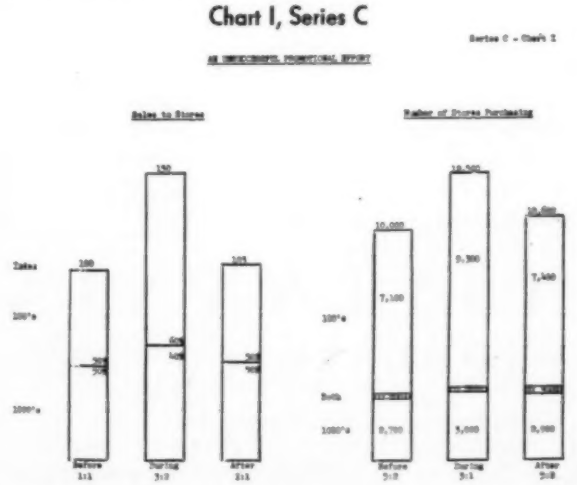
Now let's turn the picture around and view it from the point of view of the owner of Brand "N" and assume he had made the market audit. It should be obvious to him that despite product excellence he had failed to sell his product to physicians. And since products in this industry seem to be quickly labeled as good, bad or indifferent, it would seem to be indicated that the manufacturer should move quickly to test several varying promotional methods in different sectors of the Nation, using Marketing Research to identify the method most promising of sales success. Then National promotions should be revised.

So much for new products. Now how do you evaluate the success or failure of a promotional drive designed to stimulate sales for an older well established product? What are the criteria of success?

To my mind a lift of fifty per cent in sales during a concerted sales drive would be most unsatisfactory if after such a gain a sizable portion of the new market was lost and a distinct increase was not realized in the drug's distributive pattern. A failure to increase distribution for large sized dispensing packages would be particularly significant.

Ciba has followed unsuccessful competitive promotions where total dollar volumes have risen sharply during the period of intensive advertising and detailing only to produce post-promotional competitive sales patterns such as follows:

Chart I, Series C



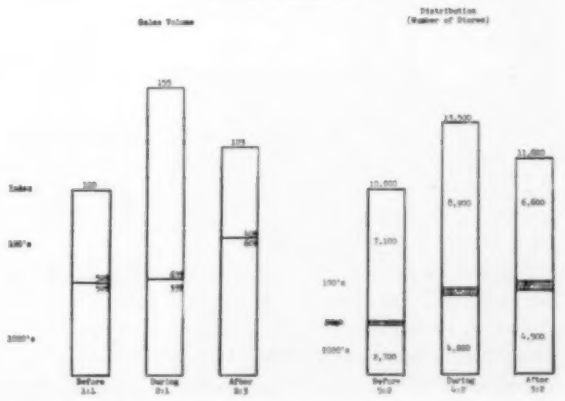
In this case history it will be noted that the principal result of the sales drive was to move a multitude of small package sizes into retail outlets during the promotional effort. Much of the movement of goods represented stocking efforts on the part of detailists in advance of working an area. It seemed like progress but the telltale of the failure of the promotion lay in the restricted movement of dispensing package sizes. Until these begin to move, you can rest assured your message to the physicians is not bearing fruit. If, immediately following an intensive promotion, the volume sag in small package size sales finds a situation where large package sizes do not show a sharp sales increase, it is safe to assume you have not materially changed the acceptance of your product. All you have done has been to create a momentary sales increment at a high sales cost.

In a successful promotional drive both your small package sizes, designed to serve the neighborhood stores and your dispensing sizes created to serve large professional pharmacies, should show sales gains. Your post-promotional era should show permanent additions to your distributive chain—particularly a gain in the number of stores stocking your large dispensing packages.

When store audits show a competitor producing a sales result such as depicted in Chart II, and your prescription survey shows an increased specification, it is time for you to mend fences.

(Continued on page 346)

Chart II, Series C



#1

Non-rolling, extra-depth, Bakelite cap; thick-flange rubber bulb; Saftee-ball glass.

#3

Regular plastic cap; thin flange rubber bulb; semi-blunt glass.

#4

Metal cap; AMEKINE oil-resisting rubber bulb; blunt glass.

Improved bottle shape. Designed to lie flat for convenient labeling. Front provides ample label space.

New Perfection

DROPPING PARTS

Protect YOUR PRODUCT'S REPUTATION

Your product's hard-won reputation is risked every time it is taken from the medicine chest. Any inconvenience, such as a non-functioning dropper, will be permanently associated with it. You can remove this risk by entrusting your carefully-compounded preparation to New Perfection dropping parts—painstakingly made of quality materials for the utmost in dependability and cleanliness.

✱ ***We can supply dropping parts to fit your bottles or furnish complete with our own bottles.***

RUBBER BULBS

are supplied in many styles and colors. Oil-resisting. AMEKINE synthetic rubber is used for oil preparations; natural rubber is supplied for other products.

CAPS

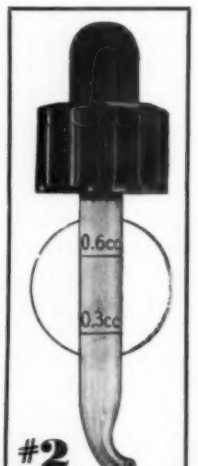
of plastic or metal, can be furnished in a complete range of sizes and colors.

DROPPER GLASSES

are available in a wide variety of styles and sizes plain or CALIBRATED in any color to mark specific dosages.

BOTTLES

in an attractive modernistic style in Amber, Blue, Green or Clear glass, are available, complete with dropping parts, in the following sizes: 2cc, ⅛, ¼, ½, 1 and 2 oz.



#2

Non-rolling, extra-depth Bakelite cap; thick flange rubber bulb; CALIBRATED special bent glass.

Write for Samples and Quotations

PENNSYLVANIA
GLASS PRODUCTS CO. INC.

"Glass Goods of the Better Kind"

430 N. CRAIG ST. • PITTSBURGH (13), PA., U.S.A.

PACKAGING AND SELLING

CHRISTMAS IN REVERSE

A very considerable part of the perfume and cosmetic industry looks upon Christmas as the harvest season and the months preceding as a tedious period of plowing, planting and cultivating. For many in the perfume business the sales which take place in the few weeks preceding Christmas may amount to as much as 80 per cent of the annual volume. For the vast majority of cosmetic companies which sell the so-called class products, basically pivoted on the department store for distribution, the Christmas season will produce at least 60 per cent of their annual volume.

But there is a sort of reverse Christmas that has been growing up in the retail trade and which has all of the earmarks of turning into a very serious evil which business by itself may be unable to combat if this trend continues. So far these reverse actions can be classified under the well-known term "chiseling."

There are indications that retailers are still not convinced that they have squeezed every possible drop of moisture from the cosmetic suppliers and that there is still room for one more squeeze. For instance, one quite well-known store in the middle west developed the brilliant idea of sending to everyone of its suppliers a box of cigars, at Christmas time. Soon after this, the startled delight of the suppliers turned to stunned amazement when they received a bill at the full price of this box of cigars. Needless to say most of the suppliers paid this bill, and undoubtedly the tobacco department of this store showed a very favorable volume of business for the Christmas season. We have not been able to discover whether this store sent a bottle of perfume to each of their cigar and tobacco suppliers followed by a bill, but there is no reason to suppose that this so-called billiant idea would be limited to one department.

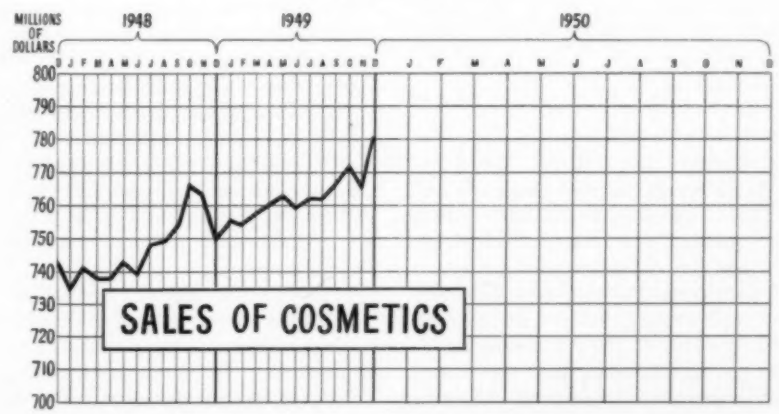
A department store in New York City, which has quite a dignified reputation, takes great pride in the annual banquet and show which they give for the store employees. This banquet is undoubtedly a great morale builder, and everybody is happy about it except the store suppliers who pay the entire bill. This bill is paid by the suppliers because preceding the banquet each one is informed that he will be allowed to advertise in the banquet program and each one is very plainly told the amount of space and the amount of money which he will contribute, presumably based upon their sales to the store.

The Christmas catalogue of leading stores was a great source of stress and worry to manufacturers before the war and will undoubtedly soon return to the high geared pressure which distinguished it in those days of real competitive selling. At that time most stores prepared a Christmas catalogue of Christmas gifts and suggestions to be mailed to store customers. There was quite a bit of competition among certain stores to excell in lavishness in printing these catalogues. Needless to say the store expected the suppliers to foot the entire bill for this catalogue and in soliciting the advertisements, of which it was largely composed, resorted to various sorts of veiled, subtle or open pressure.

One of the really great retail inventions has been taking place during the last two years in a well-known New York department store which has acquired a well deserved reputation for moving vast quantities of distress merchandise in a way that was so secret that it never betrayed the existence of this distress merchandise or affected the prestige and the standing of this company in any other retail store or market. This store has an excellent cosmetic department in which practically every brand of well-known merchandise is displayed at regular prices. Not too often does this distress merchandise appear conspicuously on its counters and hardly ever is it mentioned in store advertising.

In fact the store is perfectly prepared to guarantee that the merchandise, if it is good and if the discount off list is sufficient, say 80 per cent, that it will move this merchandise in considerable volume without any one being the wiser. Here is one way in which that feat is contrived. Let us say that the store receives a substantial quantity of distress merchandise, perhaps an over-

Retail sales of cosmetics in 1949 totaled $782,000,000, an increase of 4.3 per cent over the $749,750,000 volume of 1948, and an increase of 5.1 per cent over the $743,800,000 figure for 1947.



loaded inventory for which the manufacturer needs immediate cash. This product may be a fairly well-known perfume which the store accepts at a discount of 80 per cent instead of the normal department store discount for goods of this character at 40 per cent. Upon receipt of this merchandise, the store will turn to their suppliers of some other classification of merchandise, let us say in this instance, the suppliers of women's apparel. Each supplier in this field will then be notified that this retailer through a stroke of buying genius and through very unusual luck is in a position to provide these dress manufacturers with the very Christmas present that they will need to give their customers on next Christmas, perhaps eight months away, and that they are expected to show their appreciation by immediately withdrawing a certain amount, usually a portion adjusted to the amount this supplier sells to the store. The store may even allow this dress manufacturer a 50 per cent discount. This system has been working so well that it is reported that in a very quiet and unassuming way this particular store has moved hundreds of thousands of dollars of distress merchandise for the manufacturers of this trade alone.

We are a very inventive people and hardly ever in our history has the patent office been able to get within six or seven months of recording the inventions, brilliant and otherwise, that are filed for patents. It begins to look, however, as if some of the folks in the retail trade are the bashful and backward inventors of some of the fanciest contrivances which have yet appeared in American business. The only trouble with some of these inventions is that just as they get running at full speed, the inventor is apt to get his arm broken by a very nasty backfire. Whether this backfire will come as a united and indignant howl of protest from manufacturers or from a quick kick in the pants by a Government Bureau remains to be seen.

Future Packaging

Packaging design is going to face a great many new problems in the next few years and the people who make their living by designing and producing packages are undoubtedly entering into a very busy era.

These new problems will largely evolve from the progressive development of retailing into a more and more limited, huge, mass chain outlets, and also from the discovery that is being made everywhere in retailing that customers not only enjoy open display and self-service in retailing, but that this method of operating drastically reduces retail costs.

This means that the packages that are designed in the future will have to fill a number of basic requirements that will evolve to a certain extent almost into an engineering formula. Because of the trend toward standardized mass distribution, new packages will more and more have to make their first consideration the ability of the package to operate efficiently and without snags on the latest designs in automatic packaging equipment. A package designer will have to have an intimate knowledge of retail operation and the relation of the size and the shape of the package to the shelf and the position normally assigned to that type of merchandise.

For instance, one of the elementary principles of retailing is that a group of packages stacked side by side and on top of each other will stimulate more sales because they attract more attention and give greater confidence than solitary packages. This ability to stack may become a very important factor in future packaging. Needless to say eye appeal to the consumer will face increasingly vigorous competition from the mass of directly competitive products adjacent on the shelf and even more in stimulating and catching the highest percentage of the unplanned purchase that forms so high a percentage of every day retail sales.

Where the retail clerk still plays an important functional part in selling, the package may be used as the most direct, and in some cases the only way, of giving the sales clerk the needed information on the product. Sales managers are becoming increasingly aware of the substantial loss in volumes of sales that result from indifference or lack of knowledge of the sales clerk.

In most retail fields it is a particularly difficult problem to reach the retail clerk. It is even more difficult for the manufacturer to do a brief elementary educational job on the selling merits of his product. In a field like the grocery trade with several hundred thousand retail stores and with a continually high turn-over of retail clerks, this is almost a complete impossibility. But the package does intervene right at the moment of the customer's interest, at the place and time of sale. If a brief concise message regarding the product can be included on the package, this may well solve one of the most critical problems in packaging merchandising.

In the self-service stores where the customer must decide by herself whether she wants a product, a description of the merits and the use of the products may be even more vital than when a clerk intervenes.

It is needless to say that cost will be a vital factor in the package. As retail competition increases and as position in volume stores becomes more important, every fraction of a cent which goes into the package and is translated through mark-ups to a much higher price to the consumer, it must be studied with careful and anxious eyes.

There has been very little written about the effectiveness of television on packaging. It is probable that the companies which enter into extensive television advertising will run into a number of problems which may include possibly distortion of size and shape and color, or in a positive way, psychological impressions of size and value. This will be the problem of a few manufacturers during the coming year.

Are Department Stores Agin' the Trend

Professor Malcolm P. McNair of the Graduate School of Business Administration of Harvard University has many times in his long career given business some meaty nuts for reflective chewing.

At the recent meeting of the National Retail Dry Goods Association the professor told top retail executives that long range problems "seriously affected the future of the department store's position in the distributive picture." "The future," he stated, "lies primarily with the various forms of multiple-unit operation. Whether for the department store this means the further development of branches, or the further development of chain-type operations in department store groups, or the further expansion of leased departments, or a combination of all of these, you had better get on the job of finding how to make these various multiple-operation management techniques work with the department store types of merchandise."

Citing the Harvard Studies of retailing for many years, Professor McNair showed that the department store gross margin for 1949 was the lowest in 17 years, that is, "since 1932, which was at the bottom of the great depression."

In the 10 years period preceding the war the department store was the only one among the retail groups which failed to show any expansion in sales volume. In fact, over this period department

stores actually lost ground and at the end of the period showed a gross sales of around 4 per cent lower than at the beginning of the period. At about the same rate profit margins were declining. And yet this was a great period of expansion and growing sales for chain stores, syndicate stores and mail-order houses.

Now, in addition to the continuing growth of these retail groups, the department store faces a remarkable increase in volume of business done by house-to-house selling, particularly in metropolitan centers, by an equal growth of the mail-order catalogue houses right in metropolitan centers and by the most alarming trend they have ever faced, that is the demonstration that is now going on, particularly in super-markets, that open display and self-service is attractive to customers, will pull heavy traffic, will substantially expand the purchase of unplanned or impulse buying products and is a disasterously lower cost operation.

The record of earnings of department stores during last year showed that the large chain organization in this field did substantially better than individually owned or operated stores. It also showed, in a very large majority of cases, that the branch suburban stores did more profit-wise, per unit volume, than did the home stores. Certainly the executives of department stores, as Professor McNair points out, have some heavy thinking to do over the next few years.

There may be no question regarding the survival of the department store as a type of retailing, particularly in apparel and class merchandise, but there is a little serious question whether the department store can hold on to some of its profitable departments.

Less Profits for Druggist

The nation's drug stores did an estimated volume of nearly $3,700,000,000 in 1949 and may exceed that total in the coming year. In spite of that record, drug stores, according to the Merck Report, are receiving a declining amount of the consumer disposable income. In 1948 drug stores received 1.94 per cent of disposable income as compared with 2.11 per cent in 1947 and 2.21 per cent in 1946.

There is a growing suspicion that food chains and super-markets are cutting in deeper into the drug stores' previously exclusive province. These food stores, with a very large traffic and their open display method of operation predominantly self-service, are operating on the basis of a 20 per cent gross margin as compared to the druggists' usual 33⅓ per cent.

In a similar way profits of the retail drug trade have been declining since the peak of war earnings of 10 per cent. These declines are estimated at 9 per cent for 1946, 7 per cent for 1947, 6 per cent for 1948 and approximately 5.5 per cent for 1949. It is estimated that approximately 85 per cent of a drug store's customers stay on its books for more than two years. For this reason, new customers are needed to attract additional volume. To a growing extent druggists are inclining toward cooperative methods of pooling advertising and promotions, and there is a notable step-up in the wholesalers' plans to increase promotional assistance to their customers. It is reported that only 63 per cent of all drug stores netted more than 5 per cent last year; 18 per cent showed profits of 2 per cent to 4 per cent and one in every 10 earned less than 2 per cent and approximately the same number, that is one in 10, appeared to have operated at a loss.

The nation's 55,266 drug stores are practically a static number with the number of stores that existed before the war. During this period there has been an increase in population of over 20,000,000 people and an enormous increase in total wealth and the distribution of wealth and income, and even more, many new products developed by research have poured a flood of additional millions over the counter of the retail pharmacist.

As General Wood, the head of Sears Roebuck, stated in a recent speech, this increased population and wealth is sufficient to strain the productive capacity of the United States and its continued growth, over the next immediate period, will require still further productive facilities. In view of this statement, which is unquestionably a sound analysis, it is no wonder that many thoughtful people among the retail pharmacists are wondering what is happening to their particular branch of distribution.

How to Sell Industry

Advertising and printed matter play a primary part in management's decisions to purchase materials, packages and equipment according to an extensive survey presented yesterday at a meeting of the Industrial Advertising Association of New York.

This survey was made among customers and prospective customers of the E. I. du Pont de Nemours & Co., Inc. Three sources of information were used, including a basic mailing list of 6,841 questionnaries; a random selection of industrial magazine subscribers and 200 interviews through personal visits to 24 companies. A total of 1420 responses were analyzed.

According to this survey, practically every one in industry concerned with purchasing turned to some printed matter to locate sources of information. Trade publications were mentioned by 79 per cent; manufacturers' catalogues, 60 per cent and direct mail, 50 per cent. About 73 per cent mentioned supply salesmen as an important source of information. As to the reading of advertisements in trade publications, only four out of the 1,420 said they never read them and only 20 said that they seldom read them.

Tin

Tin is a pretty important material for this industry through the part it plays in packaging, for cans and collapsible tubes. But tin is not nearly as important as it used to be for most of its primary uses and that is why tin prices have been tumbling. There have been 19 cuts in price in four months.

According to the Wall Street Journal the humming can industry turned out 29,000,000,000 big and little cans. That is a 70 per cent jump over the volume used in the pre-war year 1939. In spite of this can makers used a tin tonnage 15 per cent smaller than they used in 1939. The reason for this big decline in the use of tin by can makers is explained by the fact that the thin steel sheet used for cans was dipped in a bath of molten tin before the war to give it the necessary tin coating. Now a new electrolytic process achieves the same complete tin coating with a thinner layer of metal.

Before the war the collapsible tubes used by this industry were almost entirely made by using 99½ per cent tin and ½ per cent antimony. During the war this trade was allowed for most of its products only 7 per cent tin with the rest lead. During this period tube manufacturers perfected a process of tin coating lead so that tubes of this character are still in general use.

As recently as 1941 tube manufacturers are reported to have used 4,500 tons of tin in 12 months for collapsible tube making. Today with far more tubes being produced their yearly use is well below 1,000 tons.

There has also been an increasing use of the aluminum tube. Aluminum now

"I like Meritseal's looks"

"but look at the thread construction"

Sales managers and production managers may not agree as to which feature makes Meritseal so satisfactory to use. The important point is, they *do* agree that Meritseal is a fine closure for fine cosmetic products.

Anyway you look at it Meritseal does an outstanding job of sealing. It is designed for economical, trouble-free application on production lines. Its beauty is second to none. Why not let us send you samples of Meritseal in the sizes to fit your own packages? Then you'll be able to see for yourself all of the features that have made Meritseal so popular. A request on your letterhead is all that is necessary.

MeritSEAL—

CROWN CORK SPECIALTY CORP.
Division of
Crown Cork & Seal Company

MAIN OFFICE: DECATUR, ILL. • NEW YORK: 60 EAST FORTY-SECOND STREET • CHICAGO: 401-09 WEST ONTARIO STREET

WESTERN REPRESENTATIVE: WESTERN CROWN CORK & SEAL CORPORATION . . . SAN FRANCISCO . . . LOS ANGELES

costs around 17 cents a pound compared to tin which is around 75 cents a pound. In the foil market aluminum has very largely replaced tin, not only because of the very favorable price due to the cost of the material, but because of the advantage of its light weight in shipping packages.

Avon Allied

Sales of Avon-Allied Products, Inc. reached $25,566,333 for the year 1949. This is a record of annual sales in the 63 year history of the company and these sales total 20.31 per cent more than in 1949. Net profits at $2,264,061 also came to a new high as compared with profits in 1948 of $1,460,947.

These sales make Avon-Allied the largest cosmetic company in America, and for this reason undoubtedly the largest in the world. In addition, net profits running at almost 10 per cent of sales for a volume operation of this kind can give quite a number of the other large companies in this industry something to chew on.

We have said before that it is becoming increasingly clear that the demonstrator working in the home appears to be running circles around the demonstrator working in a retail store, not only in the amount of total sales they can ring up but also on the cost of their operation. It is certainly something to think about that these demonstrators in the home are not carrying on their shoulders the additional burden of a heavy retail discount plus a big bag full of miscellaneous and assorted retail favors which cost the manufacturer cold hard cash.

Grocers Gain in T.P.

Certain types and brands of toilet preparations are rapidly spreading their distribution to grocery stores. The Industrial Surveys Company, which has just instituted a new service called the National Retail Audit Service, has just completed a survey of drug and toilet article distribution in the grocery retail trade.

This new service has been accepted by the U. S. Department of Agriculture because it is said to be the only existing commercial, retail store sample which has been accepted by the Statistical Section of the Bureau of the Budget. This survey was based upon a mathematical selection of 1800 stores.

In the survey it was found that 68.2 per cent of the grocers carried dentifrices, 61.6 per cent shampoos and 46.7 per cent hand lotions. A rather startling variation existed between territories. For instance, in the South, 87.4 per cent of the grocers carried dentifrices and in the Northeast, 43.4 per cent.

Department of Commerce Monthly Retail Trade Report

Retail sales of all kinds in drug and department stores showing sales for the month of December 1949 as compared with the same period in 1948.

	Department Stores	*Drug Stores*		*Department Stores*	*Drug Stores*
Atlanta	+6	+3	Minneapolis	+5	+6
Baltimore	–3	–6	Milwaukee	–6	0
Birmingham	–17	+1	Newark	–1	–1
Boston	–2	+3	New York	–4	–4
Chicago	–4	–5	Philadelphia	–5	0
Cincinnati	–3	–2	Pittsburgh	–4	+1
Cleveland	–8	–7	Providence	0	+3
Dallas	–2	+7	St. Louis	–1	–8
Detroit	–5	–4	San Francisco	X	–9
Los Angeles	–3	–7	Seattle	–1	0

For some time now certain classes of toilet preparations, and particularly certain brands in these classes, have more and more been advertised and marketed in terms of every day utilities or necessities, requiring the utmost in availability in distribution. This has been taking these products almost entirely out of the field of prestige or glamour and turning them into a commodity that would parallel the basic position of toilet soap. This means, in all probability, a continual loss of percentage sales by the druggists for brands of this sort, and a sharp cleavage in the cosmetic industry between brands of the same type of product into two groups, each seeking consumer favor along two completely different paths.

Why Factories Move

We hear a great deal of talk about the decentralization and the re-distribution of factories so that a manufacturer can be close to his source of supply for raw materials, or to his market, or for any other reason that will minimize the very high cost of transportation and will enable him to give better or quicker service. That is one reason why there has been such a booming growth in the Southwest and on the Pacific Coast, and why New England is fighting largely to stand still.

Apparently there are other reasons why people move their factories and we have just recently had two letters to serve as an example. Mr. Howard Angus, who now owns and directs Tuvache Perfumes, has transplanted this company, lock, stock and barrel, from its lavish offices in upper Manhattan to Barrington, Rhode Island. Aside from personal reasons, which may have entered into a consideration of a more preferred way of life, Mr. Angus writes, "Our riotous overhead has now been liquidated."

Another example is furnished by Katherine Gray, whom many people in New York will remember as the charming lady who produced and sold in New York City custom names in monogrammed soap. In a letter from Dick Schoenberger, the new location of Katherine Gray's soap factory and headquarters is described as, "Grandby was a sleepy little, western village until chance brought Katherine Gray's famous soap business to town. It was a typical western town in the heart of the Colorado Rockies, 17 miles from the Big Thompson Irrigation Project and 20 miles from Grand Lake, famous resort with the highest inland yacht anchorage in the world. Granby is in the heart of the pure blooded Hereford country, from its high mountain meadows comes its famous hay full of mineral content which is shipped all over the world to famous racing stables, and it is also famous for the Granby head lettuce produced there."

Katherine Gray with her husband, Dick Schoenberger, and partner, Ivor Peterson, bought the "C" Lazy "U" Ranch and decided to move the business from New York. According to this letter the business has been successful in the two most important ways. Forty thousand packages were shipped between July 15, 1948 and July 15, 1949, making it necessary for the government to build a new post-office. New Products have been developed and new retail accounts opened. In addition, from the photographs which accompanied this letter, largely devoted to ranch life, we suspect that a new way of living has been accomplished with equal success.

NEW PRODUCTS AND NEW PACKAGES

ABBOTT LABORATORIES' new developments include Di-Paralene Hydrochloride (Chlorcyclizine Hydrochloride, Abbott), a new synthetic, long acting antihistaminic drug of low toxicity; Duozine Suspension (Sulfadiazine-Sulfamerazine, Abbott), an orange-colored fruit-flavored liquid designed to simplify the administration of combined sulfonamides to infants and small children; Vita-Dulcet Tablets, brown sugary cubes with chocolate flavor containing six different vitamins; and Lacril, artificial tears, an isotonic solution of methyl-cellulose and sodium chloride with methyl-paraben as a preservative, designed to provide a moist surface to the cornea in the absence of normal lacrimal secretion.

The CENTAUR-CALDWELL DIVISION, Sterling Drug Co., Inc., now is offering Ironized Yeast in treatment-size packages. In addition to the 60 tablet-15 day supply, two new sizes are being distributed . . . a 120 tablet-30 day supply and a 240 tablet-60 day supply.

CIBA PHARMACEUTICAL PRODUCTS, INC., introduces Percorten Linguets of synthetic steroid andrenocortical hormone indicated for use in cases of adrenocortical deficiency; and Eticylol Linguets of estrogenic hormone, ethinyl estradiol, for use specifically in mammary carcinoma and carcinoma of the prostate.

DAGGETT & RAMSDELL, INC., introduces its new Hopalong Cassidy Pure Castile Soap for the young fry to tie in with the tremendous popularity of the Western favorite with the Junior cow hands. Each cake is decorated with a full color picture of "Hoppy" that won't wash off.

KATHERINE GRAY, of Granby, Colorado, has designed a distinctive line of luxury soaps for men with the influence of outdoor life in the application of sporting motifs in full color on the generous man sized bars. For women, a line of dainty scented bars are decorated with flower motifs in full color.

The IVES-CAMERON COMPANY, INC., presents Minihist, antihistaminic tablets indicated for the symptomatic relief of colds and hay fever. Each tablet contains 25 mg. pyranisamine maleate.

JOHNSON & JOHNSON announces a new-formula baby lotion which has been hospital tested and has been proven to be effective for baby skin care, and in the prevention of impetigo, raw buttocks, diaper rash, and heat rash. Based upon a new physiological concept and formula, the lotion contains hexachlorophene, which has the most powerful and the most enduring action of any of the germ-destroying agents now known.

JEAN JORDEAU INC. offers the Jordeau Home Permanent Rinseless Shampoo, a time-saving preparation which cleanses the hair without disturbing its curl. Jordeau also has developed a new hair remover, an improvement on the ZiP Formula. The new depilatory will be distributed under the name I R Hair Remover Lotion.

LEDERLE LABORATORIES' Artane Trihexyphenidyl, a new antispasmodic for treatment of Parkinsonism, is now being produced in an additional, convenient dosage form called Artane Elixir. The elixir is especially designed for those patients who are reluctant or unable to swallow the regular Artane Tablets.

MARWELL HAUGE A/S, Oslo, has recently introduced a "kiss-proof" lipstick, San Egal. The lipstick comes in six brilliant shades, and is packed in either a plastic or a metal container.

PRINCE MATCHABELLI'S Crown Jewel Cologne Parfumee, the complement of the imported French perfume, makes its debut in a four-ounce magnum crown in time for Easter promotion. For a limited time . . . through Mother's Day . . . a gift atomizer accompanies each bottle, and both are attractively displayed in an acetate-windowed gold box.

The NATIONAL DRUG COMPANY announces the addition of Natolone to its line of products. A steroid hormone of slight specificity, it acts as a precursor of many active steroids, and has been shown to be effective in the treatment of rheumatoid arthritis.

NATONE COMPANY INC. introduces, as a lipstick base, Lip-Life, an indelible soft color to be used as an overnight beautifier and as a base for daytime use under any lipstick. Lip-Life intensifies the color of the lipstick applied over it, and keeps the lip make-up fresh and smooth for hours.

ORGANON INC. has introduced three new anti-anemia preparations . . . Dodex (with oral activator) Tablets, Dodex Injectable, and Stolimin Tablets . . . all three of which utilize vitamin B^{12}, the most effective anti-anemia substance known. These three, plus Organon's blood-builder, Cytora, provide a full line of useful preparations for the treatment of practically all types of anemia.

PITMAN-MOORE COMPANY has developed two new products . . . Tablets Cohistine, a highly effective antihistaminic formula in which the danger of inducing drowsiness is greatly minimized, and Tablets Estopherol, a brand of conjugated estrogens, vitamin E concentrate and phenobarbital, for the management of menopausal symptoms.

RUSS-REYD LABORATORIES, INC., introduces Thera-Beta, a new vitamin B complex preparation with added vitamin C, as an efficient oral product supplied in capsule form.

PEGGY SAGE has created a gift item for Easter promotion consisting of a rosy-hued heart pierced by the golden shaft of a Lipstick Convertible. The heart is made of styrofoam plastic, and the lipstick includes five different shades.

SCHENLEY LABORATORIES announces the availability of Dihydrostreptomycin Sulfate (Schenley), designed for use in treatment of certain types of tuberculosis, and indicated as preoperative and postoperative prophylaxis in pneumonectomies, lobectomies, and similar surgical procedures. It also may be employed in the treatment of other infections such as subacute endocarditis, acute gonorrhea, and peritonitis due to gram negative bacilli.

SHARP & DOHME INCORPORATED announces the national release of three new preparations . . . Proketuss Antiallergic Expectorant, a new anti-

(Continued on page 350)

RICHFORD BOTTLE & CLOSURE NEWS—

published from time to time only

SPILL-PROOF MIRACLE FOR SALE

Exclusive Richford spill-proof bottles are JUST THAT. Uncapped and upside down—not a suspicion of dew forms below. For sales in real volume, you can't go wrong with these.

SALES SLIPPING?

Are your best numbers joining the flop parade? Give them one more chance with a re-do by Richford. Rich looking (yet inexpensive) Richford closures have smoothed the wrinkles from many a sales managers face. Our special caps for Sachet and Cologne containers are particularly worth investigating.

BEAUTY HINTS FOR STOCK BOTTLES

The altogether satisfactory Carr · Lowery Bottle (left) gets new sales oomph when topped by a Richford designed metal closure.

Given a stock bottle and a product, our beauty experts can solve any closure problem, either from our supply of unusual stock closures or with a design for you alone. The Pagoda-style cap shown is an exclusive made for one of our clients.

IDEA DEPARTMENT

Here are some of the new exclusively Richford creations. They're already selling fast and we know we're on the right track.

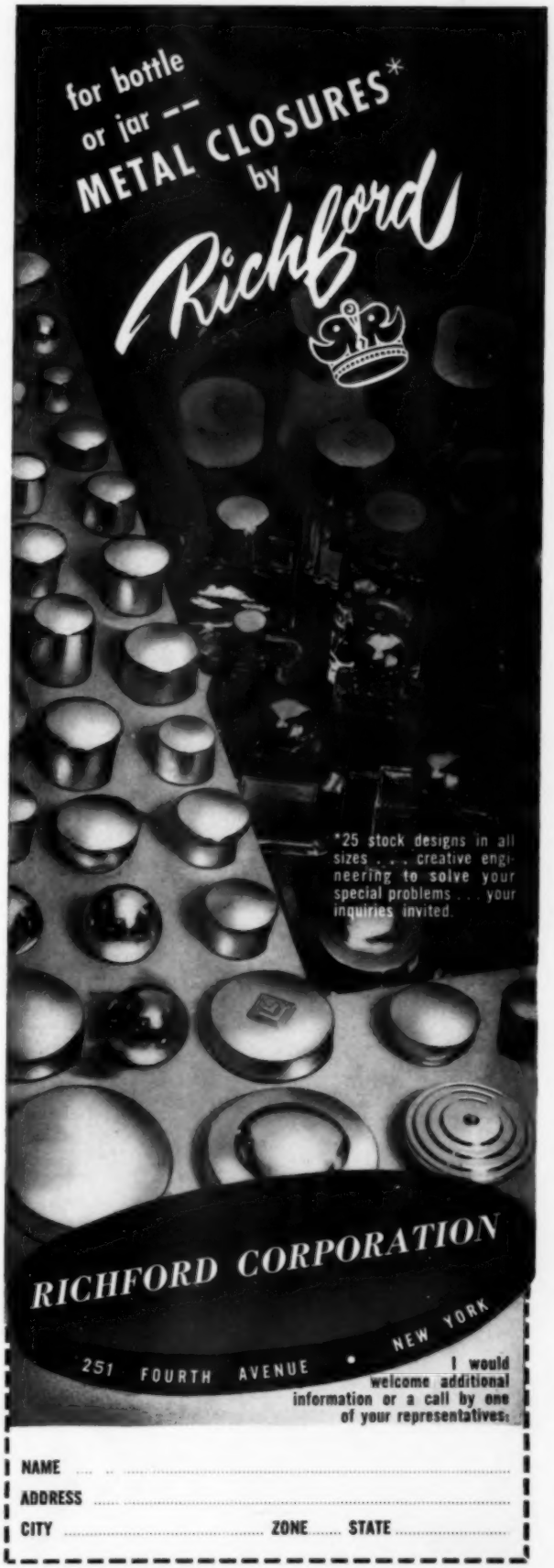
WON'T YOU JOIN US?

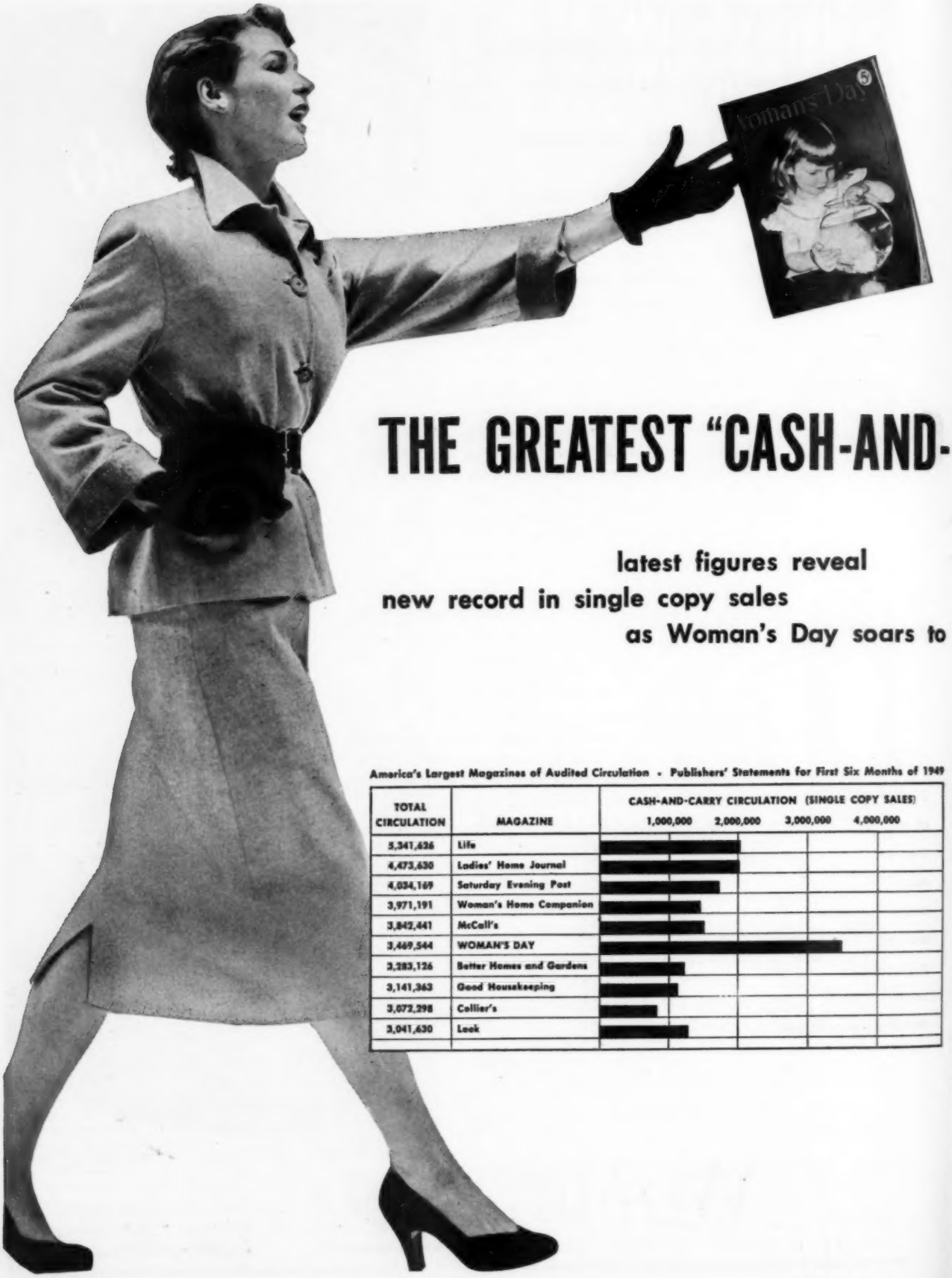
Wire, write or phone

THE RICHFORD CORPORATION

251 Fourth Avenue, New York 3, N. Y.

AL. 4-6311


for bottle or jar --
METAL CLOSURES*
by
Richford
*25 stock designs in all sizes . . . creative engineering to solve your special problems . . . your inquiries invited.
RICHFORD CORPORATION
251 FOURTH AVENUE • NEW YORK
I would welcome additional information or a call by one of your representatives.
NAME
ADDRESS
CITY ZONE STATE



THE GREATEST "CASH-AND-

latest figures reveal new record in single copy sales as Woman's Day soars to

America's Largest Magazines of Audited Circulation - Publishers' Statements for First Six Months of 1949

TOTAL CIRCULATION	MAGAZINE	CASH-AND-CARRY CIRCULATION (SINGLE COPY SALES) 1,000,000 2,000,000 3,000,000 4,000,000
5,341,636	Life	
4,473,630	Ladies' Home Journal	
4,034,169	Saturday Evening Post	
3,971,191	Woman's Home Companion	
3,842,441	McCall's	
3,469,544	WOMAN'S DAY	
3,283,126	Better Homes and Gardens	
3,141,363	Good Housekeeping	
3,072,298	Collier's	
3,041,630	Look	

CARRY CIRCULATION" OF ALL MAGAZINES

new heights

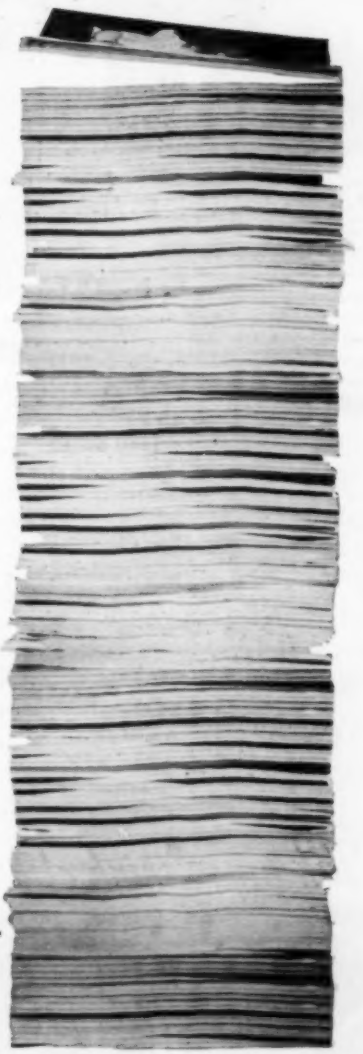
Single copy sales are the cream of magazine circulation because they are buyer-initiated. No premiums or pressures, no "song-and-dance," no special inducements bring these sales in. The single copy sale reflects the reader's desire to buy, rather than the publisher's desire to sell.

WHAT DO WE MEAN BY "CASH"? Cash is ready money . . . money the shopper is ready and able to spend to satisfy her immediate needs. Cash is what makes a woman say in one breath, "I want it" and in the next, "I've got it."

WHAT DO WE MEAN BY "CARRY"? Carry means on the go, out in the market. It is circulation that's decidedly not dead, sick, moved, disinterested, or too busy to read. Single copy customers are not only up and around. They're eager to buy . . . and that goes for products too.

"CASH-AND-CARRY"... YOUR MOST VALUABLE CIRCULATION. Cash-and-carry magazine sales represent "live" money from "live" customers . . . the richest potential for your product. The entire circulation of Woman's Day is made up of these sales . . . and Woman's Day tops all the other leading magazines in "cash-and-carry circulation."

With the December 1949 issue, Woman's Day hit a new high of over 3,830,000 — the largest single copy sale of any audited magazine in the world. And the picture for 1950 is healthy. First quarter figures show an 8.4% increase in linage and a 13.6% increase in revenue . . . the greatest number of editorial pages, the greatest number of advertising pages ever bought in Woman's Day history.

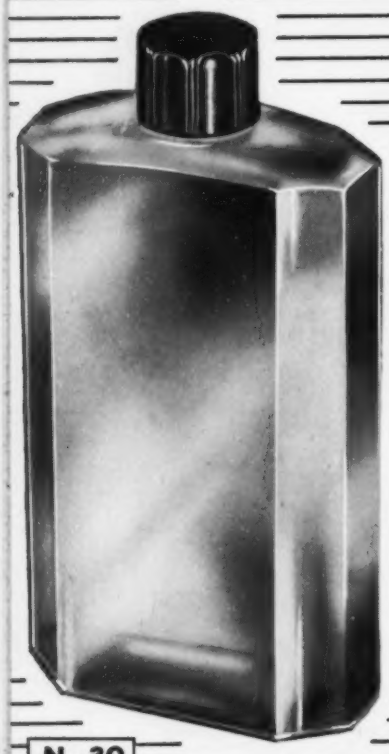


Woman's Day

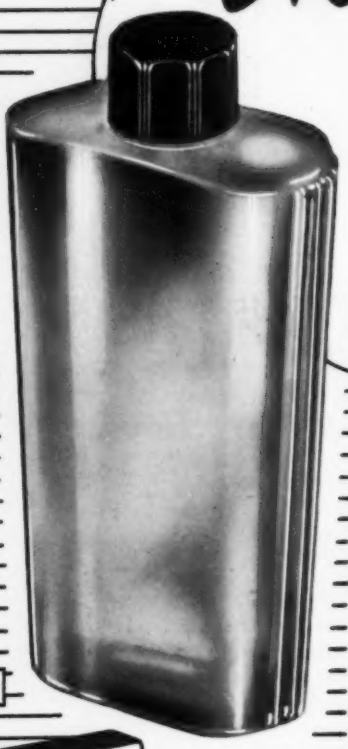
on sale at all A&P food stores—5¢

FOUR OUTSTANDING STOCK BOTTLES

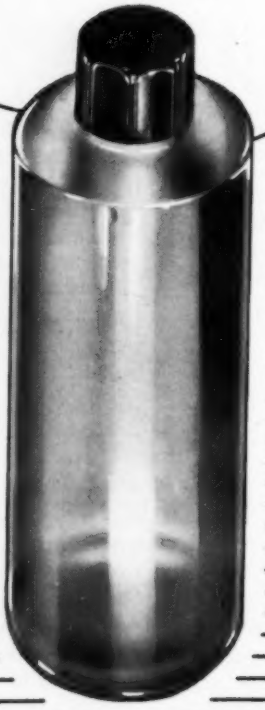
available in all popular sizes



N-30



P-45



L-33

C-39

Here's the short cut to smart packaging—an artistically designed Swindell stock bottle plus your distinctive label.

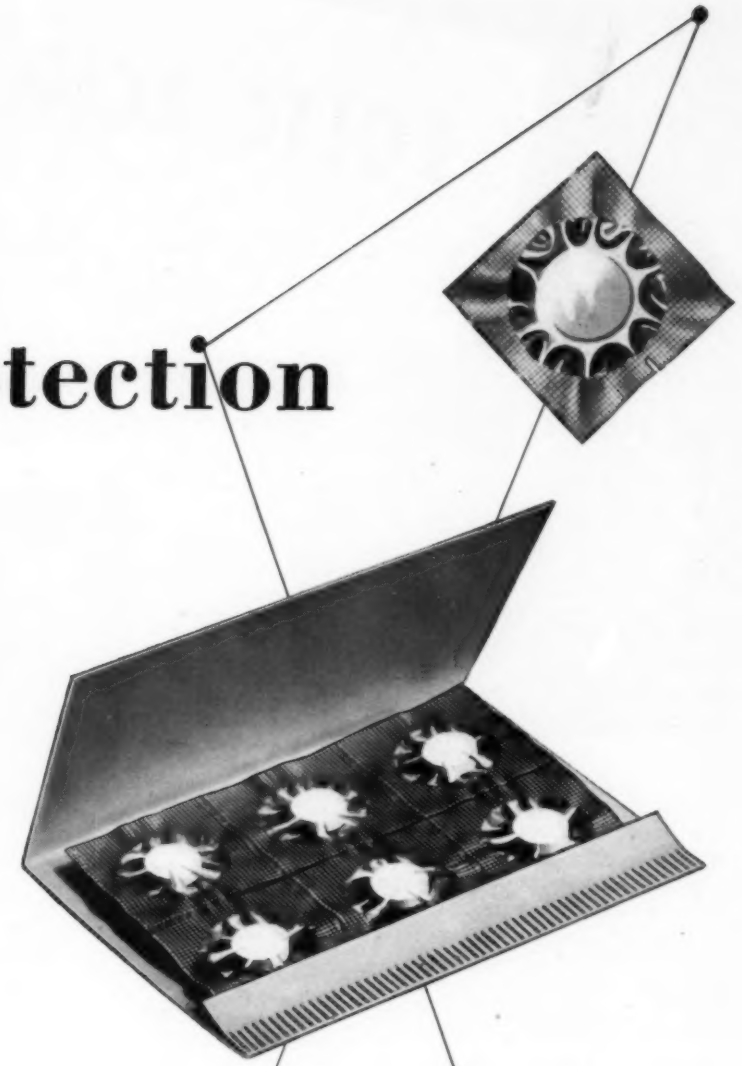
Shown here are four of the many stock bottles available for quick delivery in popular sizes ranging from 1/8 ounce to 16 ounces.

SWINDELL BROS., BALTIMORE, MD.
40 WEST 40th ST., NEW YORK 18
ROBERTO ORTIZ, HAVANA, CUBA

When you think of bottles think of

Swindell

Protection



Sanitape-Sealtite is a unique method of packaging pills, tablets, capsules, creams and powders by which each unit or unit-dose is sealed in its own airtight compartment surrounded by a crimp flange assuring complete **protection** and maintained efficacy.

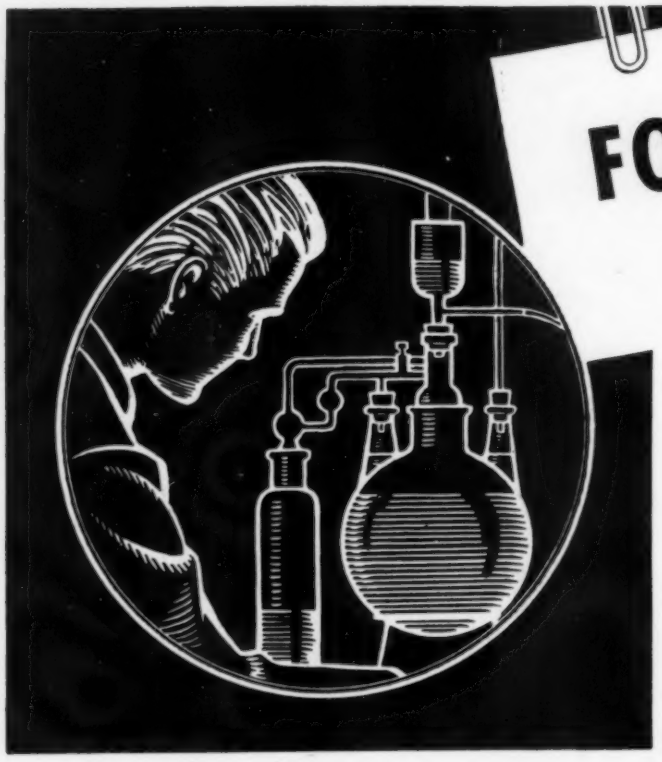
A heat-sealed catch-cover is a unique Ivers-Lee created method of making a package for sample or sale use.

Ivers-Lee packages, machines and methods are covered by 78 U. S. patents with 502 claims and additional patents pending. Available to you only through the Ivers-Lee Packaging Service. Infringing imitators will be subject to legal prosecution.

SANITAPE SEALTITE

THE SEAL OF PACKAGING PERFECTION

IVERS-LEE COMPANY, NEWARK, N. J.



FOLIC ACID

Calco

Folic Acid, an important member of the Vitamin B Complex, is being used increasingly in multi- and B complex vitamins. Folic Acid has wide application in anemia therapy and has been demonstrated to produce dramatic results in a number of macrocytic anemias, including sprue, gestational macrocytic anemia, macrocytic anemia of gastrointestinal origin, and the macrocytic anemias associated with pellagra and similar deficiency states. Folic Acid is effective either by oral or parenteral administration and is especially recommended for those patients exhibiting sensitivity to liver extract. Because anemias are generally considered dietary deficiencies, it is natural to combine folic acid with other members of the B complex in vitamin preparations.

★ *Precise and complete analytical control*

★ *Technical bulletins available*

★ *A technical service ready to assist in application problems.*

REPRESENTED IN CANADA BY CALCO CHEMICAL DIVISION, NORTH AMERICAN CYANAMID, LTD., BOX 10, ST. LAMBERT, MONTREAL 23, P. Q., ROYAL BANK BLDG., TORONTO 1, ONT.

Stocks, Sales & Service Departments maintained at:

Calco Chemical Division, American Cyanamid Company, 2472 E. Eighth St., Los Angeles 21, Calif., 1705 Locust Street, St. Louis 3, Mo.

CALCO'S Bulk Pharmaceuticals:

Sulfadiazine U.S.P.
(powder, micro crystal and Calcomites)
. . . Sulfa Drug of Choice
Sodium Sulfadiazine U.S.P.
Sulfamerazine U.S.P.
(powder, micro crystal and Calcomites)
Sodium Sulfamerazine U.S.P.
Sulfanilamide U.S.P.
(powder, crystal, micro crystal)
Sulfathiazole U.S.P.
(powder, crystal, micro crystal and Calcomites)
Sodium Sulfathiazole U.S.P.
Sulfapyridine N.F.
Sodium Sulfapyridine
Sulfabenzamide
(powder, micro crystal and Calcomites)
Sodium Sulfabenzamide
Aminoacetic Acid N.F.
Calcium Pantothenate (Dextro)
Choline Chloride
Choline Citrate, Tri
Choline Dihydrogen Citrate
Cinchophen N.F.
(and sodium salt)
Folic Acid
Neocinchophen U.S.P.
Mandelic Acid N.F.
Calcium Mandelate U.S.P.
Menadione U.S.P.
Methylene Blue U.S.P.
(powder and crystal)
Nicotinic Acid U.S.P.
Nicotinamide U.S.P.
Nicotinamide HCl
Para Aminosalicylic Acid
(and sodium salt)
Phenothiazine N.F.
(regular and drench grades for veterinary use)
Propylthiouracil
Pyridoxine HCl
Riboflavin U. S. P.
Saligenin
Certified Colors for Pharmaceutical Use

*In keeping with long-established policy, the above products are offered to ethical Pharmaceutical and Veterinary Manufacturers only.

PHARMACEUTICAL DEPARTMENT · CALCO CHEMICAL DIVISION

AMERICAN Cyanamid COMPANY

BOUND BROOK, N. J.

NEWS...

Erpenbeck Executive V.P.

William L. Erpenbeck has been appointed executive vice-president of Ayerst, McKenna & Harrison Limited, division of American Home Products Corporation. He joined the A. S. Boyle Company as chief accountant and office manager in 1929, from which he advanced to office manager of American Home Products Corp. in 1938, and comptroller and assistant treasurer in 1941, and appointed vice-president of Ayerst, McKenna & Harrison in 1948.

WILLIAM L. ERPENBECK

Addresses Mich. Trades Ass'n

George Miller, president of Strong Cobb & Co., Inc., addressed the Michigan Chemical and Allied Trades Association at the February 27th meeting on socialized medicine. Mr. Miller outlined the possible effects which socialized medicine in the United States would have on the pharmaceutical, chemical and other industries, as well as the standard of medical care received by the population.

1950 Chemical Who's Who

Leading firms in the chemical and allied industries and the important centers of chemical research have been invited to submit nominations from their personnel for inclusion in the forthcoming third edition of the *Chemical Who's Who* to William Haynes, editor, 161-163 Water Street, Stonington, Connecticut. Publication of the 1950 edition is planned for the autumn.

Munro Leaves Northam Warren

A. F. Munro, vice-president in charge of the export division, Northam Warren Corporation, has tendered his resignation, effective April first, according to Northam Warren, president. Mr. Munro, recognized as the dean of export managers in the drug and cosmetic industry, is an active member of the Export Managers Club of New York, the Seventeen Club, and the National Foreign Trade Council. R. L. Polk, who has assisted Mr. Munro as export manager, will continue to carry out the company sales policies.

A. F. MUNRO

Purocaine, Inc. Purchased

Purocaine, Inc., of Philadelphia, has been purchased from the National Foam System., Inc., West Chester, Pennsylvania, by a group of Delaware interests. The plant and laboratories have been transferred to Hockessin, Delaware. Dr. Gerhard F. Pfeiffer, new president and general manager of the company, was formerly associated with the Delaware Solvents Corporation and the Wilmington Chemical Corporation. William H. Benzei is vice-president and sales manager, while E. Edwin Gale is the secretary and treasurer, and George Cowan continues in charge of sales in the New York area.

At the present time the company will manufacture procaine hydrochloride, epinephrine and procaine base. New products will be added as developed, and the company will offer processing facilities for private label manufacturing.

Nolan With Schiaparelli

Thomas D. Nolan has been appointed assistant salesmanager of Parfums Schiaparelli, Inc., according to Arthur G. Hadley, vice-president. Mr. Nolan has succeeded Betty Robbins who resigned to accept a position in Paris.

Huff Named Research Director

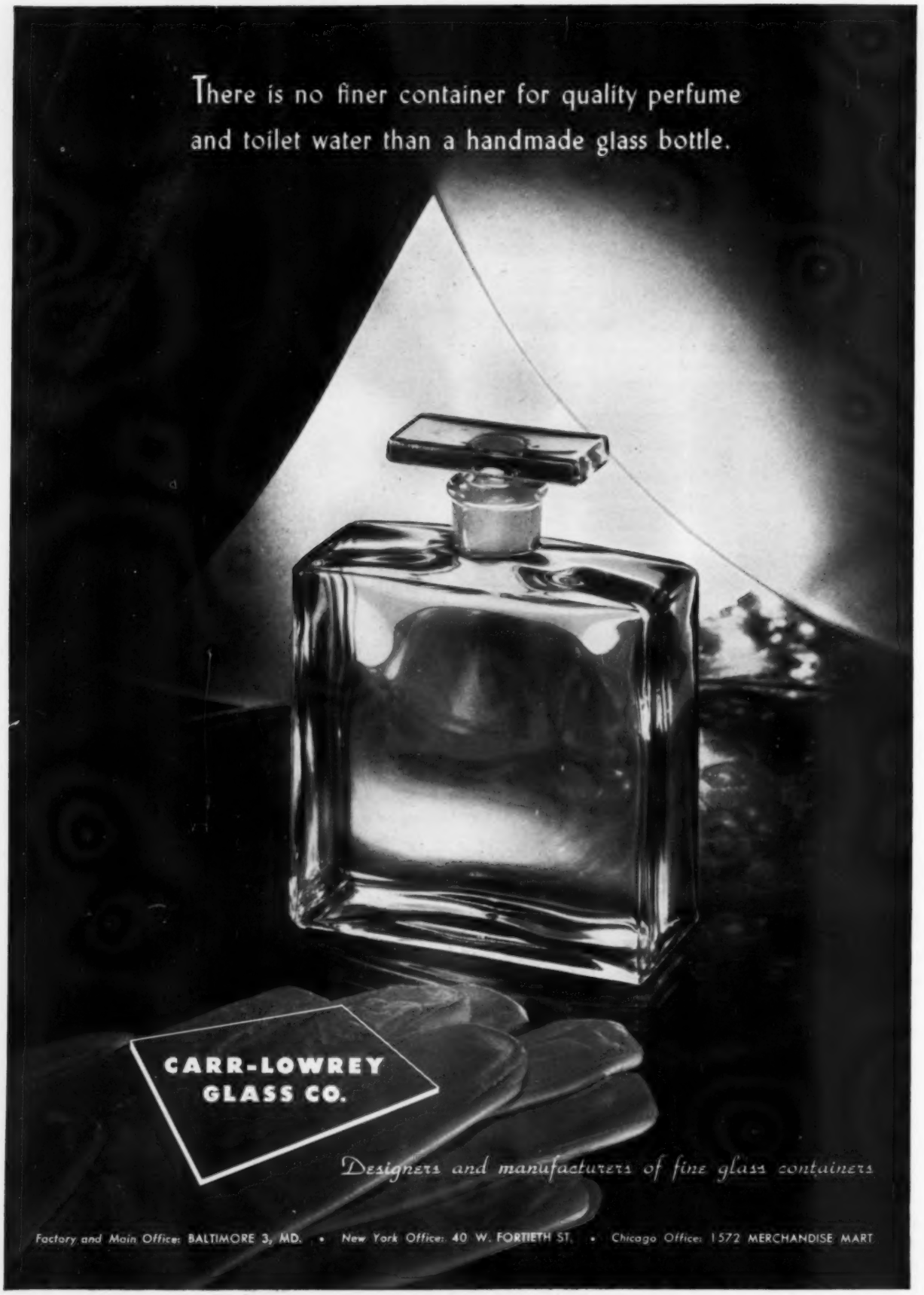
Dr. Jesse W. Huff, assistant director of biochemical research, has been named director of biochemical research of Sharp & Dohme, Inc., according to Dr. L. Earle Arnow, director of research. He succeeds Dr. Richard H. Barnes, who served in both positions prior to the new appointment.

DR. JESSE W. HUFF

To Enter Packaging Exposition

Herman Manas, president of MRM Company, Inc. states that the new line of MRM filling machines will be on display in booth 351 at the AMA Packaging Exposition in Chicago from April 24 to 26. Other executives of MRM in attendance will be S. S. Smith, general manager, V. J. Gallagher, Frank Rossetti and Fred P. Tasner, sales engineers. Headquarters for the MRM sales meetings will be the Palmer House.

The Potdevin Machine Company has also indicated that it will display its new "R line of ductor-roller type label pasters at the exposition, booth 145. In addition, there will be on display the new 1950 line of Potdevin standard label pasters, sheet gluers with cardboard attachments and removable tanks, "floating head" margin gluer and a light-duty portable assembly line conveyor. Those in attendance will be J. Henry Richmond, president; J. S. Hawkins, sales manager; James S. Hamilton, advertising manager; and sales engineers Sumner Norton, Owens L. Denton, Jack Donohoe and Truvan Gibson.


There is no finer container for quality perfume
and toilet water than a handmade glass bottle.
CARR-LOWREY
GLASS CO.
Designers and manufacturers of fine glass containers
Factory and Main Office: BALTIMORE 3, MD. • New York Office: 40 W. FORTIETH ST. • Chicago Office: 1572 MERCHANDISE MART

Owens-Illinois Appointments

A number of changes have been made in several branches of the Glass Container division of Owens-Illinois Glass Company and its Toledo sales headquarters with a view to streamlining the organization and improving its services, according to Smith L. Rairdon, vice-president and general Sales manager. James W. Colbert, manager of the New York branch since 1942, has been appointed assistant eastern sales manager and will work with C. L. Rodgers, eastern sales manager. John W. Thayer will succeed Mr. Colbert as New York manager.

Additional changes include: Harold D. Hopp, formerly manager of the liquor ware division in Toledo, now manager of Owens-Illinois' St. Paul branch; Hamer C. Knepper, until recently assistant to the general sales manager, now manager of the Columbus branch; and Warren W. Sparks, salesman in the Louisville branch, now manager of the Kansas City branch.

JOHN W. THAYER

WARREN W. SPARKS

HAROLD D. HOPP

HAMER C. KNEPPER

J. N. Hope, manager of the St. Paul branch; L. A. Cole, manager of the Columbus branch, and Ray Smith, Kansas City manager, have been appointed special representatives of Owens-Illinois in the respective territories. E. C. Jones, salesman in the Chicago branch, has been promoted to assistant manager of that branch and will work with Roger M. Baker, Chicago manager.

Charles J. Kiger has been promoted from salesman in the New York branch to New York Beverage Industries manager. John R. Brown, Chicago branch salesman, has been appointed special sales representative in the beverage division with headquarters in Toledo.

William L. Arscott, field sales manager, being congratulated on the completion of 25 years' service with E. R. Squibb & Sons, by Carleton H. Palmer, chairman of the board, as J. J. Toohy, vice-president and general sales manager, looks on. Members of the Squibb sales department presented Mr. Arscott with a silver tea service and tray at a luncheon held in his honor early in February.

Appointed by Ungerer

Ira Bennett has been transferred from the position of southern sales representative for Ungerer & Company to that of special sales representative in the New York office. Mr. Bennett, according to Kenneth G. Voorhees, president, will make calls in the trade in conjunction with Ungerer representatives, to handle unusual production problems which may arise.

G. R. Nottingham was appointed to succeed Mr. Bennett as the company's southern sales representative and is located at 901 William Oliver Building, Atlanta. Mr. Nottingham will cover the southeastern territory.

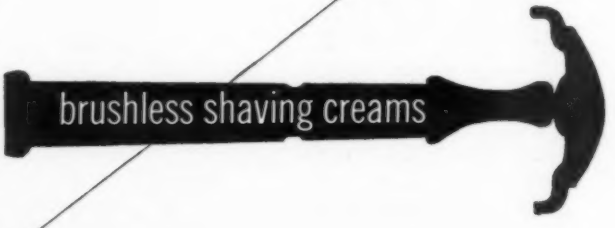
ADACIOM Views Film

More than 100 business executives of St. Louis viewed the film "For Us the Living" at the regular luncheon meeting of the Associated Drug and Chemical Industries of Missouri last month. Presented by the Proprietary Association, the film depicts the progress made in the health field in the past 50 to 75 years. The use of the film by the Missouri Association is part of the program of the Proprietary Association to permit "For Us the Living" to be shown to various educational, medical, trade and civic organizations throughout the country.

Oswald Forms New Company

P. Elmer Oswald has formed the Pulva Corporation with offices and plant at 550 High Street, Perth Amboy, New Jersey, having recently resigned from Pulverizing Machinery Company after twenty-three years as sales manager and director. The new company will manufacture a complete line of impact precision type pulverizers for granulating, wet milling and fine grinding.

superior emulsifying agent



2-AMINO-2-METHYL-1, 3-PROPANEDIOL

Soaps of this Aminohydroxy compound have unusually high emulsifying power and have no odor that will interfere with perfuming the final product. Creams formulated with AMPD soaps are remarkably free from oil "leakage". AMPD soaps are superior in stability of color and consistency, and in freedom from yellowing. Write, wire, or phone CSC for a sample and additional data.

PROPERTIES
of pure material

Molecular Weight	105.14
Melting Point, °C	109 to 111
Boiling Point, °C	151 to 152 at 10mm
pH of 0.1M Aqueous solution at 20°C	10.8
Solubility in Water g/100ml at 20°C	250

CSC

COMMERCIAL SOLVENTS CORPORATION • 17 E. 42nd STREET, NEW YORK 17, N. Y.

PRODUCTS OF THE INDUSTRIAL CHEMICAL DIVISION

Ethyl Alcohol & Derivatives • Acetone • Butanol & Derivatives • Formaldehyde • Methanol • Amines • Nitroparaffins • Crystalline Riboflavin

Hage Established Own Business

Doane Hage announces he has resigned from the Arthur Colton Company to operate his own business at 30 Church St., New York, dealing in new and rebuilt process and packaging machinery and equipment. The telephone number is COrtlandt 7-2942.

Fleming G & I Sales Agent

Fred D. Fleming has been appointed sales agent of Gane & Ingram, Inc. for the West Coast. His address is 415 So. San Pedro Street, Los Angeles.

24th DCAT Dinner

The twenty-fourth annual dinner of the Drug, Chemical and Allied Trades Section of the New York Board of Trade—generally referred to as the Drug Dinner—again attracted a capacity crowd of over 2,200 men to the Waldorf-Astoria Hotel, New York, the dinner being held this year on March 9.

Admiral William H. P. Blandy, recently appointed president of the Health

HAROLD GREEN

Information Foundation, addressed the dinner on Health Protection—A Major Line of Defense. Harold C. Green, chairman of the Section, presided and introduced Admiral Blandy.

ADMIRAL BLANDY

A. L. van Ameringen, van Ameringen-Haebler, Inc., (left) and Robert Elrick, Booz, Allen & Hamilton, who debated on whether or not a market survey could determine consumer acceptance of a fragrance in a toiletry. Event took place during the January meeting of the Chicago Chapter of the Society of Cosmetic Chemists.

Hooker Appointments

Following the annual meeting of stockholders and the board of directors in February, Hooker Electrochemical Company announced a number of changes in executive positions. Hiram P. Young, formerly superintendent of the Niagara Falls plant, was made Works manager. Frank W. Dennis, formerly personnel director and employment manager, became director of industrial relations for plants at Niagara Falls, N. Y.; Tacoma, Washington; and subsidiary Hooker-Detrex plants at Tacoma and Ashtabula, Ohio. Leonard F. Byrant and Walton B. Scott were appointed plant superintendent and technical superintendent, respectively. They had been assistant production superintendent and assistant technical superintendent, respectively.

Sierad Company Formed

Albert E. Sierad announces the formation of the A. E. Sierad Company, Inc., at 805 Mamaroneck Avenue, Mamaroneck, New York, to process bright gold, silver, and other finishes on plastics, glass, metals and wood. These finishes can be made resistant to alcohol and essential oils, and chip resistant. The company will also be set up to fill liquids and powders and do general assembly and packaging work. Mr. Sierad, for 25 years a partner in the George W. Button Company, will be president, and Stanley Sapery, vice-president. All sales will be handled through the Stanley Sapery Company at 341 Madison Avenue, New York.

Anchor Hocking Changes

Anchor Hocking Glass Corporation has announced the consolidation of its Container, Closure and Tableware display and sales offices in enlarged headquarters at 1287 Union Commerce Building, 925 Euclid Ave., Cleveland 14. The Container and closure division offices were formerly located in the Republic Building, while tableware division headquarters were previously maintained at 518 Union Commerce Building. The container and closure division is represented in Cleveland by J. H. Ferris, while the tableware, household, restaurant and bar glassware division is represented by H. P. Bow, manager, and C. T. Bow.

Ivers-Lee Divisions

The Ivers-Lee has completed negotiations with Gelatin Products Limited of Canada, who will supply Sanitape-Sealtite Unit Packaging, according to L. I. Volckening, president. The Packaging will also be available in Mexico through Shellmar de Mexico S. A., Calzada de Nonoalco 174, Mexico, D.F., which will be equipped with standard machines similar to those used in the United States. These will be covered by Mexican patents and patent applications, Mr. Volckening states.

Specht Joins Pfizer

Charles A. Specht was appointed controller of Chas. Pfizer & Co., Inc. in February. He had been works controller at the Franklin, Pa. plant of the Joy Manufacturing Co. for the past four years.

New Type Rose Oil

What is described as a "higher concentrated natural rose oil," developed by the late Dr. Scheisser of Berlin University, is being introduced in this country by F. J. Bellac, New York. The product, called Oleum Rosae, is a clear, light essential oil with strong characteristic odor, and specific gravity of 0.889 at 15° C., and 0.884 at 30° C. The oil is produced by a new process analyzed and saturated with organic components of oils equal to those of Bulgarian rose oil, such as geraniol, geranial, citronellol, nonyladehyde, and other fast hydrocarbons of the Bulgarian rose oil, such as phenylethyl alcohol or linalool.

While Bulgarian rose oil, due to its content of perargon acid, shows the harmful tendency to crystallize oleum rosae being free of this acid, does not crystallize at all, nor does it disintegrate, and thus stands up indefinitely. The oil is completely free of adulterating admixtures such as fatty oils, inferior essential oils, petroleum distillates, diethylphthalate, alcohols, organic halides, etc. It is claimed not to be a synthetic oil, its optical rotation being -2.5° to -3.0°.

Being more highly concentrated than other rose oils, higher productivity is claimed for the product and use can be cut from one-third to one-half as compared with other oils. Despite these advantages over Bulgarian rose oil, oleum rosae is lower in price.

Colton Appoints Smith

Warren I. Smith was appointed to the sales and service staff of the New York office of Arthur Colton Company. He was formerly associated with Taylor-Reed Corporation, Connecticut, as chief chemist and quality control engineer, and had previously conducted research for Charles Pfizer & Co. into methods for increasing penicillin and streptomycin yields.

WARREN I. SMITH

On Robins Research Staff

Dr. Robert S. Murphey, organic chemist formerly engaged in research work at the University of Virginia for the National Cancer Institute, was named to the research staff of the A. H. Robins Company, in which capacity he will be in charge of organic synthesis, according to E. Claiborne Robins, president.

G. J. Danco (center) attending a meeting of section IV, Commerce and Industry Division, American Red Cross, at the Hotel Roosevelt, New York, in February, to discuss the 1950 Red Cross Drive which officially opened later in the month. Money raised by section IV in 1949 amounted to $235,596, while the quota for 1950 was set at $265,000.

New U.S.P. Building

The new headquarters of the U. S. Pharmacopoeia at 46 Park Ave., New York, will be dedicated April 12. The building will be open to the public on the day of dedication, but the formal dedication ceremony will be held at 2:30 P. M. in the Hall of the Morgan Memorial Library which is just around the corner at 36th St. and Madison Ave. The dedication will consist of presentation of the building by the Board of Trustees to the officers of the U.S.P. Convention, represented by the President of the Pharmacopoeia Convention, Dr. Cary Eggleston, a prominent New York physician. The program includes addresses by Dr. Paul B. Dunbar, U. S. Commissioner of Foods and Drugs; and Dr. William G. Workman, Director of the National Institutes of Health of Bethesda, Maryland.

The new headquarters building is an imposing, fire-proof, five-story structure which has been renovated and altered to provide permanent offices for the U.S.P. staff and appropriate space for the conferences which are now an integral part of the program of revising the Pharmacopoeia.

A large attendance at the dedication is anticipated of the members of the Pharmacopoeia Convention and its medical and scientific committees and of other representatives of the medical and pharmaceutical professions whose scientific contributions have made possible the continuance of this important book of drug standards.

Acquisition of the new building has been possible because of the efforts Dr. E. Fullerton Cook, who, as chairman of the U.S.P. Revision Committee, has single handedly raised funds for its purchase through solicitation from the many individuals and medical and pharmacopoeial organizations associated with the development of Pharmacopoeial standards. The majority of the gifts came from the firms and agencies of the chemical and pharmaceutical industry whose everyday business depends on the integrity of these standards.

Bjorksten Opens in New York

Bjorksten Research Laboratories have established an office in New York at 50 E. 41st St., according to Dr. Johan Bjorksten, president of the laboratories. The new office is occasioned by expansion, enabling better service to be given clients throughout the country. The Chicago office continues under the direction of Vice-president Dr. Edwin L. Gustus.

Finlay Advanced by Pfizer

A. C. Finlay has been appointed assistant director of the Biochemical and Production Division of Chas. Pfizer & Co., Brooklyn, N. Y. Mr. Finlay, who has been associated with Pfizer since 1929, was previously in charge of the Pfizer Culture Development Laboratories. Now he is responsible for the coordination of activities in connection with new product development by biochemical means, as will as impleting basic research being conducted on the production of known chemicals by new methods.

A. C. FINLAY

New research personnel recently added to the Biochemical Research and Production Division at Pfizer include Dr. J. F. Snell, Dr. Richard N. Shoemaker, Dr. Arthur R. English, and Samuel C. Beesch. Dr. Snell heads the recently formed Atomic Isotopes Laboratories, where research work in biochemistry is being initiated by the utilization of radioactive isotopes in the investigation of fermentation processes. Besides having previously worked with Pfizer, Dr. Snell did research on fermentation problems with U. S. Forest Products, a regional laboratory of the U. S. Department of Agriculture.

Mr. Beesch, formerly director of the Biological Laboratories of Publiker Industries in Philadelphia, will work on development of biochemical processes for production of fermentation products. Dr. Shoemaker and Dr. English, recent graduates of Lehigh University and University of Wisconsin, respectively, will work on fundamental research in the field of fermentation chemistry.

Brookfield Brochure

Brookfield Engineering Laboratories is distributing a new brochure on the Brookfield counter-rotating mixer. Copies of the brochure may be obtained by writing the laboratories at Stoughton, Massachusetts.

Foreign Business Contacts

The United Trade & Manufacturing Corp., P. O. Box 601, Kampala, Uganda, Africa, is interested in establishing contacts with businesses which desire representation in foreign markets, pertaining to any commodity.

Trans-Union, Pohjoisrante 4, Helsinki, Finland, wishes to make contact with those cosmetic materials suppliers who are interested in representation in Finland.

R. J. HERMAN

Atlantic Transfers Herman

R. J. Herman has been transferred to the Chicago office of the Chemical Products section, the Atlantic Refining Company, located at 111 West Washington Street, room 939. Mr. Herman will handle Atlantic petroleum chemicals in the midwestern states.

Gilbert With Ames Company

Dr. Max Gilbert joined Ames Company, Inc. in February as medical Director and will assist Dr. Conklin, who continues as Research director, as well as director of the corporation. Dr. Gilbert served in the medical department of the Schering Corporation for eight years and later as medical director for Wm. R. Warner Company and Bilhuber-Knoll Corporation.

Oussani Withdraws from Company

James J. Oussani has withdrawn from the partnership of Perl-Oussani Machine Manufacturing Company, leaving I. Perl as the sole proprietor. The name of the company has been changed to Perl Machine Manufacturing Company and remains at the same address.

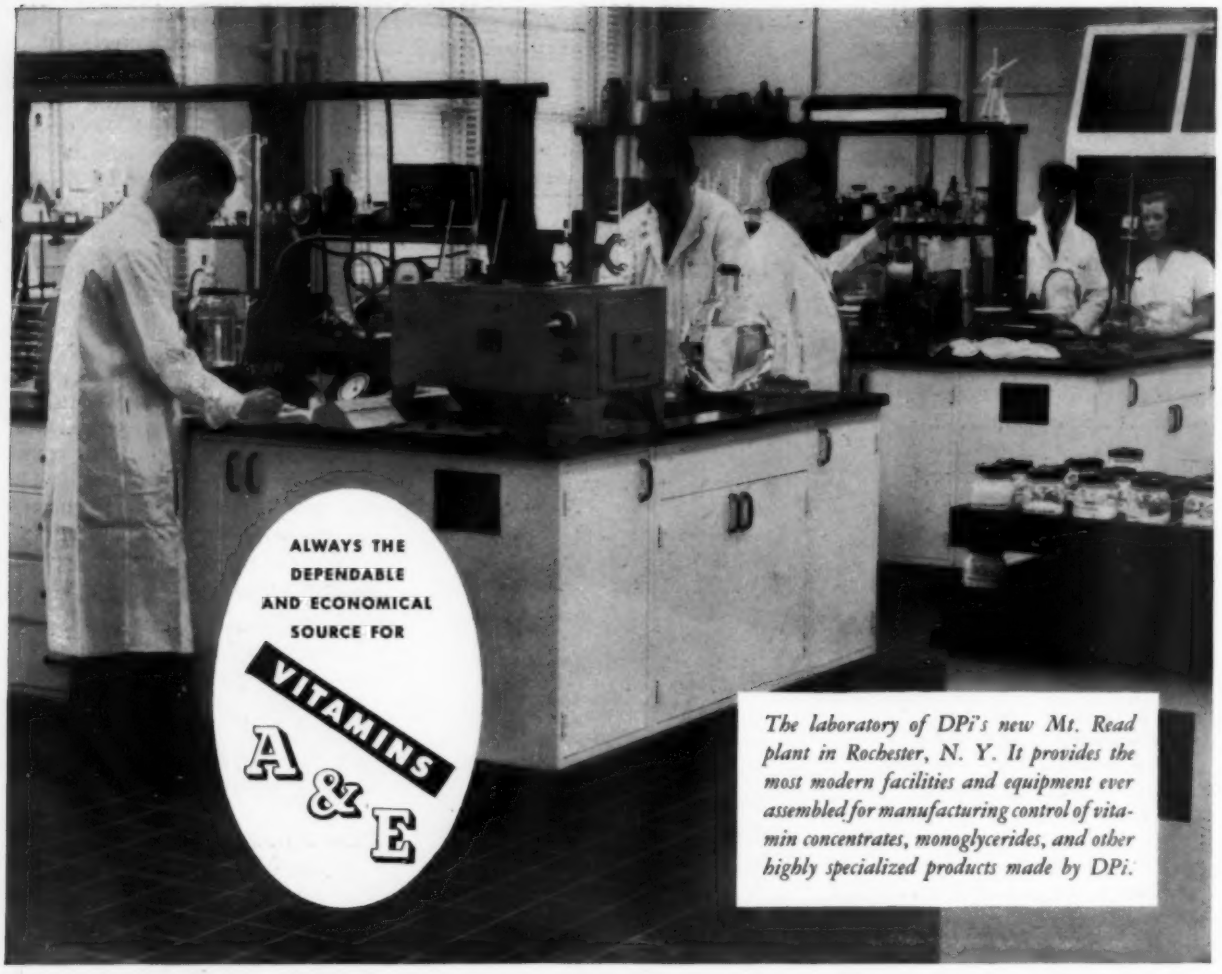
BIMS Golf Schedule for 1950

The BIMS has announced the 1950 schedule of golf tournaments, with the first one taking place at the Ridgewood Country Club on June 20. The second will be at the Wheatley Hills Golf Club, July 18, and the third at the Winged Foot Golf Club, August 22.

Pfizer Appoints Three

Robert H. Briggs, former manager of the industrial sales division, Chas. Pfizer & Co., Inc., was named assistant general sales manager. Additional appointments included Marshall N. DeNoyelles, eastern regional sales manager, and Richard Burnham, who was made head of the sales service department.

John W. Preston, executive secretary of the Canadian Pharmaceutical Association, pressing button which started the 500-gallon glass-lined mixing tank at the opening of the new Sharp & Dohme (Canada) Ltd. laboratories. Looking on, left to right, are Dr. Arthur D. Kelly, assistant executive secretary, Canadian Medical Association; Eugene L. Kuryloski, general manager, Sharp & Dohme (Canada) Ltd.; and John S. Zinsser, chairman of the board of the parent company.



The laboratory of DPi's new Mt. Read plant in Rochester, N. Y. It provides the most modern facilities and equipment ever assembled for manufacturing control of vitamin concentrates, monoglycerides, and other highly specialized products made by DPi.

Everything's Under Control!

● "Everything's under control" has come to be a pat phrase to assure one that "everything's o.k.—there's no need to worry."

Nowhere can it be more aptly applied than here at DPi where scientific vigil is maintained to assure the uniform quality, potency, and stability of every gram of vitamin concentrates that leaves our plant.

Beyond these quality controls is the large-scale, continuous production at DPi which means delivery of top-quality products to customers at lowest possible prices.

That is why the pharmaceutical and food industries and other users of oil-soluble vitamins rely so confidently on DPi.

Do you have the latest DPi quotations on vitamin A concentrates and tocopherols for immediate shipment?

DISTILLATION PRODUCTS *industries*

791 RIDGE ROAD WEST, ROCHESTER 3, N. Y.

Division of Eastman Kodak Company

570 Lexington Avenue, New York 22, N. Y.
135 South LaSalle St., Chicago 3, Illinois
Gillies & Loughlin, Los Angeles and San Francisco
Charles Albert Smith, Ltd., Montreal and Toronto

Distillers of Oil-Soluble Vitamins and Other Concentrates for Science and Industry; Manufacturers of High Vacuum Equipment.

DPi

HIGH VACUUM RESEARCH AND ENGINEERING

Calif. Cosmetic Ass'n Officers

Carl Mitchell of "42" Products Ltd., was installed as president for 1950 of the California Cosmetic Association at a dinner early in February. Additional officers included N. W. Taylor, of Avon Products Inc., as first vice-president; Gene Salee, Gene Salee Inc.,

CARL MITCHELL

second vice-president; Lucile Bullock, Physicians Formula Cosmetics, secretary; and John E. Danley, Merle Norman Cosmetics, treasurer. The following members were named trustees: Owen C. Carter, Charm Products Inc.; Alan J. Coghlan, Nerthercutt Laboratories; Eugene Coleman Jr., De Kama Inc.; Davis Factor, Max Factor & Co.; Jack C. Leeds, F. Ritter & Co.; Arnold L. Lewis, Howe-Lewis Inc.; H. R. Schmidlapp, Shor Laboratory; Kenneth C. Simpson, Container Service Co.; and H. P. Willats, Colonial Dames Inc.

McDaniel Appointed to Schering

Appointment of Max A. McDaniel to the position of Metropolitan division supervisor has been announced by Dr. John N. McDonnel, vice-president of Schering Corporation. Mr. McDaniel has been west central district supervisor of the central division for the past year.

Kolisek With Pulva Corp.

Ferdinand Kolisek, formerly associated with Pulverizing Machinery Company, has been named secretary and treasurer of the recently formed Pulva Corporation, Perth Amboy, N. J.

Popper & Klein Alters Name

Popper & Klein, Inc. announces that its corporate name has been changed to Popper & Sons, Inc., and that all activities previously conducted by both Popper & Klein, Inc. and PerfeKtum Products Co. will be continued under the new name. The change in name does not reflect a change in management, personnel, facilities or firm policies, according to the company.

Miles Named Supervisor

William Miles has been named supervisor in charge of the certified food color plant operated for Sterwin Chemicals Inc., by the Hilton-Davis Chemical Company, division of Sterling Drug Inc., according to P. Val Kolb, Sterwin president.

WILLIAM MILES

Continental Can Appoints

W. B. Larkin has been made sales manager for the Chicago City district of Continental Can Company and R. E. Tanner, sales manager for the Chicago Tri-State area, according to W. M. Cameron, central division sales manager.

Stange Booklet

Wm. J. Stange Co., Chicago, has a 32-page booklet entitled "The Story Behind Stange." The booklet, mostly pictorial, shows exterior and interior views of the company's main plant and general offices in Chicago.

Krebs Honored by Lueders & Co.

Henry Krebs became the forty-third member of the Veterans Organization of George Lueders & Co. February seventh on the completion of twenty-five years in the transportation department of the company. A luncheon was given in his honor at the Drug and Chemical Club during which he was presented with gifts from the company and from employees.

Johns Named V. P. of Cochran

The appointment of Robert P. Johns as executive vice-president and general manager of Jacqueline Cochran Cosmetics was announced by William M. Holmes, chairman of the board, and Jacqueline Cochran, president. Mr. Johns had formerly been associated with R. H. Stearns Co. and Paines, both of Boston; Elizabeth Arden, Inc.; and Castleton China, Inc., respectively.

Leshin With Blanshaft Metal

J. Leshin, of 565 Fifth Ave., announces that he is now representing Blanshaft Metal Specialties Inc., Long Island City, N. Y., manufacturer of compacts and other metal specialties, exclusively for the cosmetic trade.

Hinde & Dauch Booklet

The Hinde & Dauch Paper Company has just published a catalogue-type booklet descriptive of various standard and speciality boxes used for packaging and shipping. The 32-page booklet, "How to Pack It," outlines the specific uses for some 70 different types of corrugated boxes, indicating the construction features of each.

Past presidents of the California Cosmetic Association who attended the organization's dinner meeting and installation of new officers last month. Left to right are Andrew Norman, Merle Norman Cosmetics, 1937 president; Maurice Goldman, formerly of Sales Builders Inc., now with Dispensers Inc., 1936 president; Henry W. Miller, Henry W. Miller Cosmetic Co., 1944 president; Adrian Awan, formerly of Bencano, now with Adrian Awan Theatrical Presentations, first president (1932); Alan J. Coghlan, Nethercutt Laboratories, 1949 president; and Chris Nelson formerly of Nelson Laboratories, and now with "42" Products Ltd., 1941 president.

Drawing of new plant being constructed for Warner-Hudnut, Inc. in the Los Angeles Central Manufacturing district, which will serve as a distribution and manufacturing center for the Pacific Coast area. Over 50,000 square feet in area and in excess of $500,000, the building will serve as a regional home for the activities of twenty cosmetic and drug concerns affiliated with Warner-Hudnut.

Sheets to Represent Guerlain

Elmer Sheets has resigned as editor of BEAUTY FASHON to become West Coast representative for Guerlain, Inc. Mr. Sheets will work under the direction of E. K. Stoyanoff, Guerlain sales manager. Mr. Sheets became associated with DRUG & COSMETIC INDUSTRY in 1930, and became editor of BEAUTY FASHON when it was acquired by its present ownership in 1936.

Kellys (America) Reorganized

John Kellys (London) Ltd., botanical and essential oil house, 24 Old Broad Street, is reorganizing its American affiliate, Kellys (America) Ltd., with headquarters at 2 Broadway, New York. J. E. Astor, managing director of the parent company spent several weeks in the United States during February, in connection with a change in the management of the New York office.

Dr. Fischer Heads Ciba Production

Dr. Werner H. Fischer has been appointed vice-president in charge of production of Ciba Pharmaceutical Products, Inc., Summit, N. J., according to Ciba President T. H. Davies Haines. Dr. Fischer was first associated with Ciba in Basle, Switzerland, where he was employed as a research chemist from 1936 to 1940. He was then sent to the American company to assist in the manufacture of hormones. Three years later he was placed in charge of hormone manufacturing at the Summit plant, and, in 1945, he was made manager of all chemical manufacturing operations. Last June he was appointed director of production.

A native of Switzerland, Dr. Fischer received the degree of doctor of science from the Federal Institute of Technology at Zurich. He has been a United States citizen since 1945.

Weidgenant Named Canadian Rep.

Albert Verley & Company announces that its Canadian representative, Robert Weidgenant, is located at 222 Front Street, East Toronto, Ontario. The telephone number is Elgin 0111.

To Study Terramycin Results

Dr. R. A. Patelski, coordinator of new products development at Chas. Pfizer & Co., Inc., left on an extended visit to South American countries, where

DR. R. A. PATELSKI

he plans to discuss with clinicians and Public Health officials the clinical results obtained with Pfizer's new antibiotic, terramycin.

N. J. Machine Corp. Tops Million

Following action at the last meeting of the board of directors of New Jersey Machine Corporation, it was announced that the corporation had increased its capitalization to one million dollars. The corporation has been in business since 1917, starting with the manufacture of box-making machinery, and then entered the packaging field, and since the war has produced the first machine for "dry" labeling.

New Sharp & Dohme Plant

The new $400,000 pharmaceutical manufacturing laboratories of Sharp & Dohme (Canada) Ltd. at 1100 O'Connor Drive in East York Township, were officially opened in February. One of the most modern pharmaceutical manufacturing plants in Canada, the new laboratories will be the Canadian production and distribution center for all Sharp & Dohme pharmaceutical and biological products, serving medicine and pharmacy throughout the Dominion.

Brief addresses were made at the opening ceremonies by John S. Zinsser, chairman of the board, Sharp & Dohme, Inc., parent company and president of the Canadian subsidiary; John W. Preston, executive secretary of the Canadian Pharmaceutical Association; and Dr. Arthur D. Kelly, assistant executive secretary of the Canadian Medical Association.

Johnson with Bristol Labs.

Victor T. Johnson has been named sales manager of the Chemical sales division of Bristol Laboratories Inc.,

VICTOR T. JOHNSON

according to Richard A. Anderson, vice-president in charge of sales. Mr. Johnson, who was formerly assistant manager of the domestic sales division, will continue to have his headquarters at 630 Fifth Avenue, New York.

Kay-Fries Offers New Chemical

Kay-Fries Chemicals, Inc., has commenced production of limited quantities of trimethylorthoformate. According to the company, the new trimethyl ester offers unexploited possibilities in organic synthesis and may eventually prove more economical than its homolog, triethylorthoformate, which the company has manufactured in carload quantities for a number of years.

Flavelle Retires from Innis Speiden

Thomas G. Flavelle, director and assistant secretary of Innis, Speiden & Co., New York, retired from active management March 1, after 41 years of service. Mr. Flavelle, who was in charge of the Gum and Wax Division of the company, will continue as a director and will serve in an advisory capacity. Joining the firm on February 19, 1909, Mr. Flavelle was placed in charge of the division which manufactured seasons and dressings for the leather industry. He later headed the unit added to the company's Jersey City plant for the processing of gums and waxes, some of the oldest items on the Innis, Speiden list.

Jacobs Opens Branch Office

Albert L. Jacobs, New York City patent and trade-mark attorney, has opened a branch office in Philadelphia

ALBERT L. JACOBS

in the Land Title Building. He has taken over the practice of the late T. Bertram Humphries.

New Kimble Glass Brochure

Kimble Glass, division of Owens-Illinois Glass Company, has released a new 12-page brochure on Neutraglas molded containers, including photographs and specifications of the various items. Copies of the booklet may be obtained by writing the Container and Accessories division, Kimble Glass, P.O. Box 1035, Toledo, Ohio.

New Steroid Hormone

A new steriod hormone, pregnenolone, which may prove to be similar in therapeutic response to that of cortisone and ACTH in rheumatoid arthritis treatment has been made available by Casimir Funk Laboratories, Inc., affiliate of U. S. Vitamin Corp. When used intramuscularly in a series of rheumatoid arthritis patients, according to a recent report, pregnenolone relieved pain within three to seven days in many cases, increased muscle strength, improved appetite, and restored general vigor and well-being. In three out of seven arthritic patient in one series, pregnenolone (acetate) produced striking improvement when administered orally.

Casimir Funk Laboratories has made available limited quantities of Pregnenolone to investigators who are qualified and eligible to conduct experimental clinical investigations.

Dr. Pogge Heads Merrell Dept.

Dr. Raymond C. Pogge has been appointed chief of the Clinical Research Department of the Wm. S. Merrell Company, according to Merrell President Nelson M. Gampfer.

Dr. Pogge was formerly associated with Merck & Co., where he conducted clinical research and evaluation of new

DR. RAYMOND C. POGGE

therapeutic agents. Prior to that he was assigned to the U. S. Marine Hospital at Carville, La., where for four years he was engaged in chemotherapy research. In his new position at Merrell he will direct clinical research and development of new medicinals.

Emerson Drug Names Officials

John H. Kelly has been appointed executive vice-president of the Emerson Drug Company of Baltimore, according to Kenneth A. Bonham, chairman of the Executive Committee and president of Emerson. Mr. Bonham also announces the appointment of John F. Brawner as vice-president; Francis H. McAdoo as vice-president; M. E. Brennan, secretary; Benjamin Boyd, treasurer; and James H. Easter, assistant treasurer.

Magee-McKelvy Sales Manager

Walter B. Magee has been named sales manager of the Vick subsidiary, Alfred D. McKelvy Co., according to McKelvy president R. K. Hines.

Dr. Evans Visits Europe

Dr. Ralph L. Evans, president of Evans Research and Development Corporation and Evans Chemetics, Inc., is making an extended visit to Europe to observe new trends in foreign research. He is visiting England, France, Germany, Holland, Belgium, Switzerland, Italy, and the Scandinavian countries to confer extensively with leading scientists concerning postwar technology and scientific achievement. He will also confer with his European affiliates.

USI Purchases Patent Rights

The acquisition by U. S. Industrial Chemicals, Inc., of important foreign rights under pending United States patents covering the synthesis and manufacture of pyrethrin-like chemicals was recently announced by William P. Marsh, Jr., president. Corresponding applications have been filed in all major foreign countries.

Mrs. Ethel May Tracy

Mrs. Ethel May Tracy, wife of Kenneth W. Tracy, Fritzsche Brothers, Inc., died February 23rd at her home in Douglaston, Long Island, of adenocarcinoma. She had been ill for some time. Mrs. Tracy is survived by her husband, a son, Dr. William K. Tracy, of York, Penna., and a daughter, Mrs. Marion E. Jamieson, Great Neck, Long Island.

John S. Britton

John S. Britton, general manager of the Bay division, Parke-Davis & Co., in Bridgeport, died February 14 at his home in Fairfield, Connecticut. He was fifty-nine years old.

O. Dexter Neal

O. Dexter Neal, cosmetic chemist, died suddenly at his home in Rockville Center, N. Y., February 21 of a heart attack. For many years Mr. Neal was chemist for Primrose House and worked on the development of many cosmetic creams and other products. He also developed a special bromo acid for coloring lipsticks. In recent years he has been a sales representative for lipstick and other cosmetic colors manufactured by Hilton-Davis.

Charles G. Predmore

Charles G. Predmore, vice-president and a director of Difco Laboratories, Inc., died February 7 of a heart attack at the age of forty-nine. He had been associated with the Difco organization since 1921 and was also a member of the board of directors of the Govel Brewing Company.

MONEY-SAVING IDEA

We made a roll of paper

take the place of thousands of boxes—and saved our customers thousands of dollars annually

"Why not bundle packages by machine, instead of packing them into expensive boxes by hand?" When that question was asked some years ago it led to an advancement in packaging methods that has resulted in remarkable savings for many manufacturers. And, as in numerous other instances, "PACKAGE" created the machines that have made this improvement applicable to a wide range of products.

These machines wrap the packages in groups of the desired number and attach labels to the ends of the bundle. The bundle produced is so strong that it can carry bottles in cartons, even compressed coal blocks, books, etc.

The bundling machines can be fed directly from the wrapping or cartoning machines or by hand, and may be equipped with an automatic unit which assembles the packages in various groupings – one, two or three layers each.

Large Labor and Material Savings

Savings on the cost of using made-to-order boxes range as high as 60%. Labor savings are equally impressive, amounting to thousands of dollars annually with a single machine. Transportation costs are also cut, for the paper used to make the bundle weighs only one-third as much as a box. Less floor space is required in the packaging department, and a large amount of storage space is saved, for a roll of paper, which will produce several thousand bundles, replaces an equal number of boxes.

GET ALL THE FACTS

on machine bundling. Write our nearest office for full information.

See us at the PACKAGING SHOW

Navy Pier, Chicago April 24-27

NEW YORK CHICAGO BOSTON CLEVELAND ATLANTA DALLAS
DENVER LOS ANGELES SAN FRANCISCO SEATTLE TORONTO MEXICO, D. F.

PACKAGE MACHINERY COMPANY
SPRINGFIELD, MASSACHUSETTS

MANAGEMENT FORUM

By Francis Chilson
Industrial Consultant

New Plant Program

You can expect me to keep on repeating the fundamentals of plant development until they are generally understood, not only by production people, but also by top management, because in spite of plans and programs, top management finally puts up the dough and has the final word. For fifteen years I hammered away incessantly on the desirability of single story factories. People thought it was a phobia with me. But I am pleased to observe that the majority of new plants that have been built in the past few years or are on the drawing boards now, are single story buildings. Once in a while a die-hard gravity addict will insist on two stories, and once in a while a company will ignor the lessons of experience and the norms of the industry and build a multiple story unit. That of course is their misfortune; it's their own money and they may waste it if they wish.

I am going to repeat here some of the principles which seem to me sound because experience has shown that many people do not understand these principles, and when they do, they very often forget when the time comes to apply these principles in a practical fashion.

Site of selection comes first of course. A book could be written about that. But for the time being I am going to assume that the site has been selected and you are ready to begin the design and layout of the plant. Also I am assuming that all your space data has been accumulated and rechecked and that it is both accurate and adequate. Hence you already know roughly the size of the required building.

The first step therefore is to plot the site, allocating to each plant function an area within which it can grow and expand without confusion with other functions or departments.

These areas are: Warehousing (including receiving and shipping functions). Warehousing relates to the handling and storage of all kinds of materials. I regard warehouse as one operation and not several as is commonly the case. Raw material warehousing, packaging material and finished stock warehousing are really a single function requiring identical handling equipment with very few exceptions. Shipping, which also is a material handling operation as well as a storage operation, must be part of the area devoted to the storage of finished goods. Formula weighing likewise should be located in and made part of the raw material section of the warehouse.

The next important area is the manufacturing area which comprises all the departments that compound and manufacture goods ready for packaging. I do not regard a department devoted to the manufacture of chemicals, which must in turn be compounded with other materials before packaging, as a finished product. A printing department or a box shop or a collapsible tube or can making department would also be considered in this category.

Some firms print their own labels and make their own boxes, cans and collapsible tubes. But all such activities are collateral to the main purpose of the plant and should be subordinated. The correct flow for materials from such departments is into storage areas, even though in some cases, volume and efficiency might dictate direct delivery from source departments to point of use. The manufacturing areas with which we are concerned might be called "primary manufacturing departments." These departments now and always will be concerned with four physical categories: liquids, semi-solids, powders, solids, i.e., products having some preformed geometric shape. These departments deliver directly to packaging departments although in some instances an aging period might be required.

The next department or group of departments is concerned with final assembly or packaging. The packaging area might in some cases be one large open area or subdivided as for instance where sterile techniques are involved.

Up to this point what has been said applies as well to the manufacture of cosmetics as it does to the manufacture of drugs.

Having provided for primary manufacture, packaging and warehousing of all kinds, we must now consider allocating space for corollary manufacturing activities. As mentioned above these activities include the manufacture of chemicals and packaging materials of one kind or other. Such activities also include the manufacture of biological products which might entail housing large animals (in large urban localities this activity might entail a remote and separate location altogether); it includes the manufacture of products necessitating the use of large equipment not related to ordinary manufacture and suitable only for specialty products such as the manufacture of antibiotics; it includes large extraction operations.

Chances are the average firm might never engage in any corollary activities but it *might* and one must anticipate that possibility. One of the characteristics which distinguishes most corollary activities is that such operations require handling a vast tonnage of raw materials as compared with the weight of the final product. Consider the manufacture of hormones for example. Consider the antibiotics. Consider also the vitamins, synthetic and otherwise. Vitamin B_{12} for example requires processing about four tons of liver to produce a few ounces of the final product. From the standpoint of the plant manager such operations, regardless of how complex, are material handling operations. This extreme ratio between the tonnage of raw material handled and the weight of finished products is true also of the production of alkaloids and several other vegetable extractives; it is true also of the manufacture of synthetic chemicals, which have the further disadvantage (which dictates separate housing) of being highly corrosive in some instances and in others explosive, irritating, noxious, extremely dusty or inflammable.

Up to now we have blocked off the site to provide for primary and corollary activities. We must now consider other essential activities, not a part of, but necessary to plant operations. These activities relate to services of various types; such as power and steam generation for heating purposes, air conditioning, dust collection, water treatment, transformer stations, sewage disposal in some cases, effluent treatment in others, especially in connection with corrollary manufacturing activities, and other forms of waste disposal. In addition there are areas to be devoted to personnel services such as packing areas, cloak rooms, cafeteria, medical, recreation and personnel control areas; there are still other areas to be devoted to control and research laboratories and general offices.

These diverse service areas must be provided for and should be disposed of in a way that will not affect the logical, integrated expansion of the main plant while providing for expansion within themselves. Not all these activities require additional space for expansion purposes. A steam generating plant's capacity may be multiplied by substituting a larger or higher pressure boiler for the original unit. Laboratories, especially research laboratories, may expand very rapidly; offices at a much slower rate. But the possibilities in each case must be weighed and provision made for independent space expansion without conflict with other departments.

It is because such possibilities were not originally anticipated that the average plant is an inefficient hodge-podge.

The expansion of the main plant, which always proceeds by small space increments, can be provided for by arranging the general warehouse and the manufacturing and packaging departments in parallel lines, so that operating activities can gradually expand into the warehousing area. In such an arrangement the packaging department, because of its long lines, is arranged parallel with the warehouse and the four manufacturing divisions—liquids, semi solids, powders and solids—should be arranged perpendicular to the warehousing area so that each division can expand independently of any other. You may not have all of these divisions at the time new construction is undertaken, but you had better anticipate that someday you will have. Hence you should make provision for such areas even if at the beginning these areas are temporarily used as warehouse adjuncts.

I have heard manufacturers who for instance were long on tablet manufacture, assert positively that under no circumstances would they ever become involved in the manufacture of liquid preparations or injectibles or biologicals. But time changed their minds. Mr. Big may own all or a major portion of the business and he personally and positively may assert himself on this score, but his assertion, take it from me, doesn't mean a damn thing because if research or trade necessities or competitive requirements dictate a change in the complexion or emphasis of the business, you can bet your bottom dollar that the first one to change his mind will be Mr. Big himself. When his profits are jeopardized he'll forget all about the statements of policy he laid down with such unassailable emphasis a few years previously when the new plant was built. Obviously you cannot fly in the fact of orders and you cannot challenge company policy but if you are wise you will realize that nothing in business is more certain than change and you will dispose your warehouse area so that you can, as inevitably you will be called upon to do so, provide for new product categories that were not originally contemplated.

In laying out a new plant it is wise not to be over-influenced by the character of the business as it now is. In designing a new plant you are creating something that will endure as a plant for fifty years in the normal course of events. You can't predict volume changes and you can't predict the nature of new products that may be added during the life of the plant. But if you remember the fundamental principles of plant layout and if you are ever conscious of the norms of the industry, you will not go far wrong.

The norms are, I repeat, that drug and cosmetic products always were and always will be in the form of liquids, semi-solids, powders (including granules), and pre-formed solids. Such products always were and always will be distributed to consumers in containers, small containers, of some kind or other. Consumer products never will be retailed in fifty-five gallon drums or in tank cars. These norms determine space relationships and relative departmental sizes.

And the primary fundamental in plant layout is that warehouse space shall be disposed of as an area parallel to operating departments, so that it is always immediately available as expansion space. Warehouse space, since it contains no equipment, is always easy to absorb and additional warehouse space is always cheap to build. The idea of separate warehouse space for the drug and cosmetic industry is fundamentally wrong (with certain exceptions which involve risk as for example the warehousing of inflammable or explosive materials or the storage of bulky, cheap materials which can be stored in unheated, unlighted sheds or out of doors without any weather protection at all). In some such instances silos may be used to advantage and liquids, especially solvents may be stored in out of door or underground tanks. But the disposal of underground and out of door tank farms must be carefully considered so that the expansion of the principal operating building will not eventually come into collision with such areas. It is a common fault to find tank farms lying in the direct path of expansion simply because the original plant planners wanted to keep pipe lines as short as possible. It is for this same reason that power plants invariably are located in the wrong place.

I should like to add as a final word that paralleling warehouse and manufacturing activities is not entirely new. In planning some of the old multi-story plants, attempts were made to locate on each floor the materials utilized by the departments on that floor. This made warehouse space available for expansion purposes but eventually all storage was pushed off operating floors and either outside warehousing was made necessary or the whole building had to be reoriented. Another difficulty consisted in the fact that the operating departments and the warehouse areas in a multi-story plant never could be balanced. Since multi-story buildings usually have the same floor size such an attempt resulted in a condition where some floors were overcrowded and others were underburdened. In any event the plan never worked for large departments such as a packaging department because in every case it was utterly impossible to store packaging materials on the same floor where they were used. Because of the unbalanced condition of the several floors in a multi-story building so laid out, service actitivies of all kinds were salted all through the building wherever there was space for them, with the general office usually occupying the best space in the wrong place, invariably on the first or second floor instead of the top floor.

The drug and cosmetic industry is a selling business. People will not demand our products as they must steel and other primary products. We have too many competitive products. Each of us has to sell his products with all the vigor possible. Hence every plant exists to service sales and that means not only rapid deliveries but low costs and the minimization of capital investment in plant of all kinds. Hence all this emphasis in careful plant planning.

I am often asked the question: how big a plant should one provide for assuming that there is some remote hope that the wildest dreams will someday be realized? My answer is, there is no limit so long as the firm continues in the same business and deals in consumer packaged goods. In the trade already there are plants containing over a million square feet of floor space. The majority of plants of course never will reach such a size. But a few acres added to the initial plant site is a sound investment even if the extra space is never used for plant expansion. When, however, a firm begins to diversify new, separate buildings may be required on the original plant site and in some instances economic circumstances may dictate branch plant operation.

This question is also asked: at what stage of growth does it become desirable for a drug or cosmetic firm to establish a branch plant? My answer is, at no stage, unless the branch plant operates an entirely unrelated business. I have never known a case in the drug and cosmetic industry where branch plant operation could economically be justified when all the facts were known and all the costs and savings realistically appraised. The largest firms in the industry have never been able to justify separate plants. I made a careful study of the subject for the largest of the face cream manufacturers and in spite of enormous tonnage both inbound and outbound, branch plant operation could not be justified economically. The size of this operation may be gauged from the fact that the plant is required to handle many hundreds of carloads of material annually to say nothing of a vast trucking operation. I have made similar studies for many large drug manufacturers with the same result.

The Lipstick Menace

I'm "agin" lipsticks. The use of these smeary things is contributing to the breakdown of the American home. Time was when my daughters never went to bed or to school or anywhere else without affectionately kissing the old man. Now that they are in the lipstick age, they never kiss the old man anymore; it spoils their make up. They merely offer a cheek to the paternal lips. The same goes for Ma too and anyway Pa doesn't wish to go to the office with lipstick smears all over his puss. But when Pop comes home, after having had to work late at the office, he finds it difficult to explain lipstick tracks on his physiognomy or his shirt. Can't you cosmetic chemists make a lipstick that won't offset?

The Swedes And The Irish

During the hunting season last fall I had as one of my guests, the renowned Swedish engineer, John Friden,

800 TABLETS A MINUTE

with

NEW COLTON
16-PUNCH ROTARY PRESS

New Colton No. 216 Rotary Tablet Press is built for fast, economical production of all kinds of tablets up to 5/8" diameter and 11/16" cell. Shaved, heat-treated gears, running in sealed oil bath, give permanent precision and long life—an exclusive Colton construction. Variable speed for different materials. Micrometer cell adjustment. All adjustments easily made.

Our 65 years experience as specialists is yours for the asking. Write or phone.

ARTHUR COLTON CO.
DIV. SNYDER TOOL & ENGINEERING CO.
3405 E. LAFAYETTE • DETROIT 7, MICH.
Offices in Principal Cities

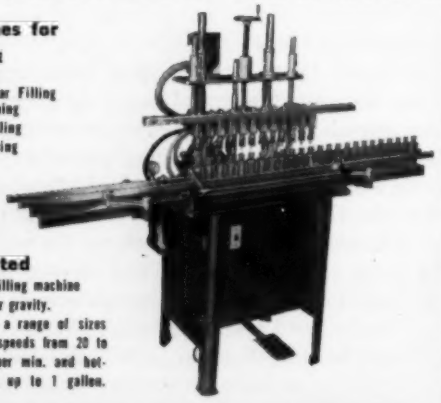
SPECIALISTS IN PHARMACEUTICAL AND PACKAGING MACHINERY FOR OVER 65 YEARS

Looking for
EFFICIENCY in Filling Machines?

PRECISION PERFORMANCE

Perl filling, closing and cleaning machines SAVE YOU MONEY because of LOWER COSTS—HIGHER SPEEDS. Write for Catalog D-3.

Machines for
Bottle Filling
Can Filling
Tube and Jar Filling and Cleaning
Ampoule Filling
Bottle Cleaning

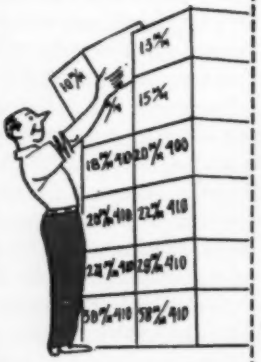


Illustrated
Perl Bottle Filling machine for vacuum or gravity. Available in a range of sizes with filling speeds from 20 to 200 bottles per min. and bottle capacities up to 1 gallon.

PERL
MACHINE MFG. CO.
72 Jay St. Brooklyn 1, N.Y.

MOLDED CLOSURES *by* Terkelsen

STOCK



Stock sizes 10 m/m to 58 m/m in phenolics or striking urea colors

CUSTOM

We specialize in private mold designs

Terkelsen MACHINE COMPANY
324 A STREET, BOSTON 10, MASS.
Jesselson Sales Co., Inc.
347 Fifth Ave., New York 15
J. Rabinowitz & Sons, Inc.
2 Hanson Place, Brooklyn 17

president of Bristol Myers Engineering Co. (Yes, B-M has an engineering subsidiary; they make special equipment of which more anon.) We did a lot of walking and a lot of talking and we had Swedish pancakes and a drop of the crather to wash them down with. Johnny told me an interesting bit of history. He said that when the Danes and the Swedes invaded Scotland and England they also tried to land in Ireland. But that was something else again for they got tossed back into the sea. Johnny says that his ancestors were so impressed with the beauty of the Irish countryside that, ever since, it is traditional in the Friden family to cry themselves to sleep every night because they weren't born in Ireland. I doubt his sincerity however, because I noticed that night, after John had gone to sleep, he snored like hell in Swedish.

The following information is supplied by manufacturers of the equipment described and claims made below by these manufacturers are passed along for what they are worth. Presentation of such notice in this department is not to be taken as endorsement of the claims or of the equipment.

Stokes Stand

The F. J. Stokes Machine Company, Philadelphia, Pa. have re-designed their No. 1-C Multi-Purpose Stand used for mounting of coating and polishing pans.

Built for heavy duty, trouble-free operation, the new Stand carries pans up to 42" in diameter, either steam-heated or standard. The angle of support is adjustable for operator convenience or work requirements.

A new type gear box prevents abrasive materials from reaching the gear train or oil seeping outside the gear box. A heavy duty upper bearing carries most of the load and takes both axial and radial thrust.

The new Stokes No. 1-C Multi-Purpose Stand is designed for easy cleaning and sanitary appearance.

Complete details will be sent on request by the F. J. Stokes Machine Company, 5900 Tabor Road, Philadelphia 20, Pa.

Unit Shipments

Virtual elimination of damage in the export shipment of 2,125 cartons of pharmaceuticals was recently achieved through the use of steel containers that protected the cargo against breakage and pilferage and simplified packaging and materials handling problems.

Gerhard & Hey Co., Inc., New York City, international shipping agents, reported that the shipment, which weighed 11½ tons, included several types of pharmaceutical products in jars, tubes and bottles. Out of the entire consignment, only two jars were broken despite the fact that the export cargo was packed only in cardboard cartons regularly used for domestic shipment.

The cartons were trucked from the Norwich Pharmacal Co., Norwich, N. Y., to Pier 23, East River, Brooklyn, and there loaded manually into five Dravo Transportainers, 275-cu.ft. steel boxes developed especially for cargo protection and easier material handling. The Transportainers are provided as part of the customer relations program of Bull Lines which operates steamship service to Puerto Rico from New York, Philadelphia, Baltimore, Charleston, Savannah and Jacksonville. Bull Lines has upwards of 300 Transportainers in use.

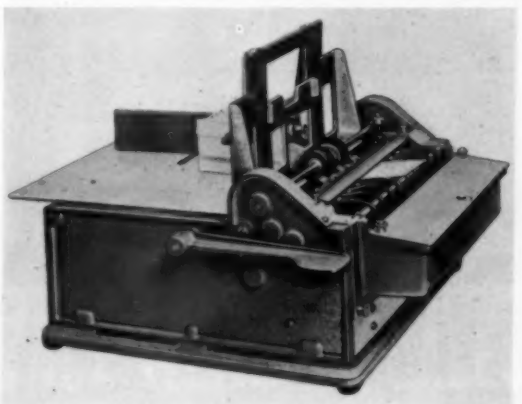
Besides reducing damage, use of the steel containers also resulted in substantial savings to the pharmaceutical company because export packing was not required, the forwarding agent asserted. In the past, such shipments had to be crated in steel-strapped, double-wall export cartons and even then damage was excessively high. Export packing also increases the cubic size of a shipment because large numbers of individual cases have to be packed with small cartons.

On Bull Lines' pier, an average of 425 domestic cardboard cartons were packed securely in each steel container. Transferring the cartons from truck to container took less than 3½ hours. The export container ordinarily used held about 25 Norwich cartons. The equivalent of 16 separate export containers therefore was loaded into a single Transportainer. This eliminated all the exterior marking, and "paper work" necessary for individual export cases. It also reduced the amount of handling needed on the pier. Once loaded, each container was hoisted aboard ship in a single operation.

In Puerto Rico, the consignee received his merchandise exactly as it was to be distributed to retail outlets. He had no unpacking or uncrating problems; the goods were sent to retailers in carton lots.

Automatic Feed Label Gluer

To give manufacturers an opportunity to discover for themselves the adaptability of the Nelson Auto-Feed Labeler to their own hand labeling problems, the Nelson Label Machine Corp., 59 Edison Place, Newark 2, New Jersey, is offering their machine, upon request, for a free 10 day trial.



Available in three sizes, for labels 1" to 3" wide 2¼" long, 2½" to 7" wide, and 5" to 10" wide, the Nelson Auto-Feed Labeler, feeds labels automatically from a stack.

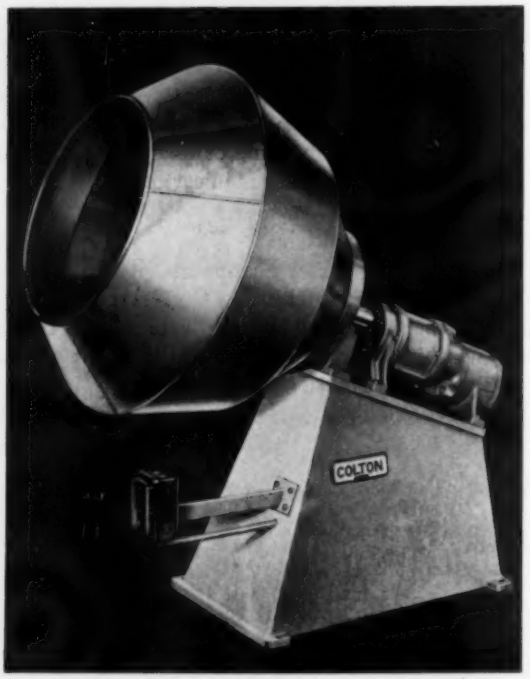
Two unskilled girls can operate the Nelson Auto-Feed Labeler as a team, working at top speed. By tapping one of the two trigger-action levers, one label at a time is fed through by the friction feed mechanism, "metered" with the desired amount of glue. Adjustments are provided for label thickness and amount of glue applied. Waste of glue, sloppy glue application, and the double-feed of labels is thus eliminated. The Nelson Auto-Feed Labeler can be stripped for cleaning and reassembled without the use of tools. All parts are corrosion-resistant.

Literature will be provided by the manufacturer on request.

Colton Coating Pan

An improved heavy duty, large capacity, sugar coater and polisher for pills and tablets, designated No. 6A, is announced by Arthur Colton Company, Division of Snyder Tool & Engineering Company, Detroit, Michigan.

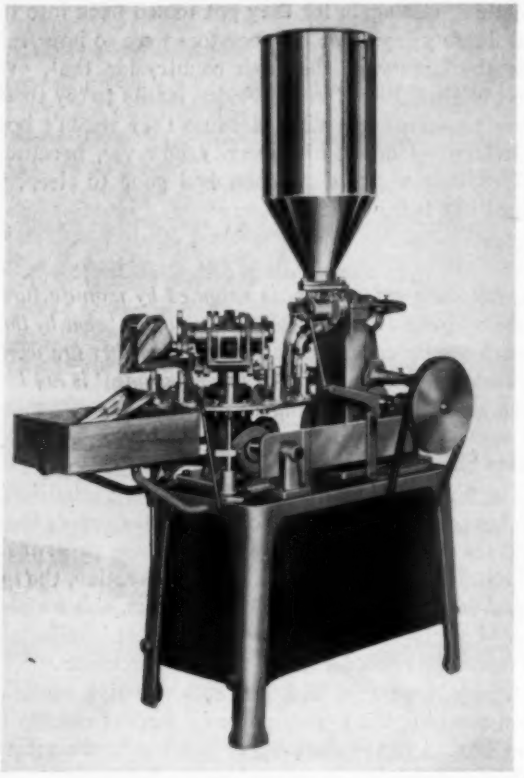
Because it is designed for processing large batches of pills and tablets, the improved Colton No. 6A Sugar Coater and Polisher is equipped with a large, heavy outboard bearing to carry the additional load and assure the necessary ruggedness and rigidity. Copper or



galvanized pans up to 48" diameter are available, and galvanized pans may be canvas lined for polishing. Power is supplied by a 1 H.P. polyphase motor with integral geared speed reducer. Motor and speed reducer are built as a unit and drive is direct from the motor through the reducing gears, eliminating possibility of slippage under load. Recommended pan speed is 29 rpm. Shafts are mounted on anti-friction bearings with the gears completely enclosed and running in oil. The structure is heavy welded steel to provide permanent rigidity and precision in operation. Gears and bearings are designed for smooth, vibrationless, quiet operation.

Model 706 Perl Machine

The Perl Machine Manufacturing Company announces that the greatly improved Model 706 Perl Machine can fill aluminum tubes with materials as light as S.A.E. No. 10 oil with perfect leak-proof closure.



The savings made by using aluminum are only possible by employing a single closing unit which automatically makes two folds in one direction and one reverse turn. The tube is sealed without crimping, clips or soldering. The machine is fully automatic, requiring the attention of only one unskilled operator to place the tubes in the holders before filling. Thereafter the tubes are filled, closed, and ejected entirely automatically at higher speeds than were previously thought possible.

In the filling operation the measured quantities are maintained to an accuracy of 0.3 per cent. A suck-back pump near the mouth of the filling tube eliminates possibility of drip; therefore, labeled tubes may be filled without fear of soil. All parts coming in contact with the solution are made of stainless steel. Speeds on regular production exceed 40 per minute on 1 1/8" tubes and 30 per minute on 1½" tubes. Descriptive literature and prices may be obtained from Perl Machine Manufacturing Co., 72 Jay Street, Brooklyn 1, N. Y.

Jones Semi-Automatic Cartoner

R. A. Jones & Company, Inc. of Cincinnati, have perfected a radically new, semi-automatic cartoner—

(*Continued on page 360*)

The best Filling Machine made costs you less than the cheapest machine you can buy. That is why all these famous products are handled on a U. S. Rotary Vacuum Filler. You will want to know more about this superb machine. Write us for the Filler Bulletin.

U. S. BOTTLERS' MACHINERY CO.
4013 N. Rockwell St. Chicago 18, Ill.

OFFICES: Boston—Dallas—Houston—Denver—Los Angeles—New York—Phoenix—Portland—San Francisco—Seattle—Tampa—Montreal—Toronto—Vancouver—Winnipeg • EXPORT OFFICE: Toledo, Ohio

Selectrol—an Automatic Checkweigher for Packaging...

Selectrol is an automatic check-weigher separating packaged products into three classifications . . . underweight, EXACT WEIGHT and overweight. This new unit solves "Mis-packaging" by eliminating troublesome underweight cartons as well as overweight containers which threaten profitable operation . . . completely removes the human element . . . cuts per unit packaging costs to the lowest level ever attained. A number of models are available, some of which are designed to check-weigh ahead of top closing or sealing equipment. Overweight packages are deflected to the left and trimmed of excess product. Underweight packages are deflected to the right and product is added. EXACT WEIGHT containers continue straight ahead for finished wrapping and sealing.

These new SELECTROLS are the newest electronic means of classification . . . are fully automatic . . . highly accurate . . . will operate at speeds up to 120 packages per minute in capacities of from 2 oz. to 2 lbs. For complete details write the Electronic Equipment Division at the address below.

Service by nation's foremost electronic service specialists!

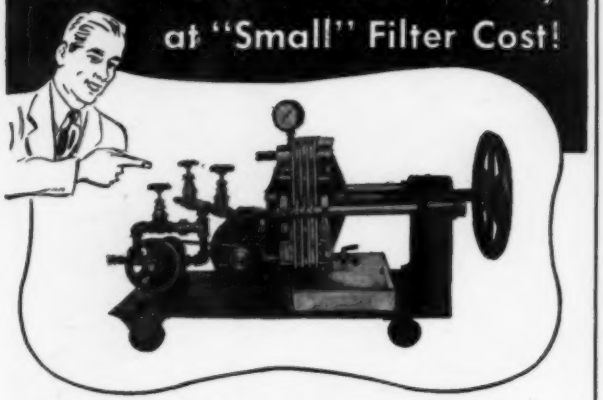
•

Nationwide service through the RCA Service Company, Inc.,* is yours when you buy the SELECTROL. The electronic experts of this specialized service organization supervise the initial setup and adjustment, also supply whatever subsequent service you need.

*Electronic servicing subsidiary Radio Corporation of America

EXACT WEIGHT SCALES
Industrial Precision
THE EXACT WEIGHT SCALE COMPANY
950 West Fifth Avenue, Columbus 8, Ohio
Dept. AK, 2920 Bloor St., W. Toronto 18, Canada

Here's "BIG" Filter Efficiency at "Small" Filter Cost!



● For the modest industrial requirement where high efficiency is needed at low cost, HORM Model 100 provides the utmost in performance. Utilizes 4 to 8 pads. Frame size 10 inches square.

● For all filtration, clarification, polishing, etc., of drug, chemical, cosmetic or pharmaceutical preparations, there is a HORM Filter to meet your needs.

Write for latest illustrated Catalog

F. R. HORMANN & CO., INC.
17 Stone Street, Newark 4, N. J. • Plant: Glen Cove, Long Island
NORTHERN GLASS COMPANY, 118 Sacramento Street, San Francisco, Cal.

BROWN PACKETS . . .
Openers of New Sales Outlets

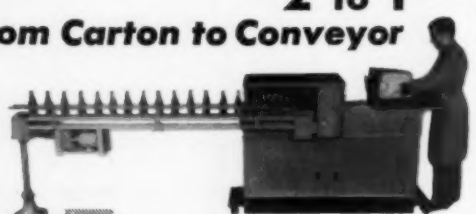
Consumer demand for small, individual quantities of drugs or cosmetics opens up new sales outlets for your dry, free-flowing product in Brown Packets. Made to your exact specifications, in color, descriptive matter and trademark reproduction. Brown Packets are precision sealed to protect contents from producer to consumer. Send us a small quantity of your product for packeting suggestions.

Brown Bag Filling equipment fills packets and envelopes of dry, free-flowing material for scores of the leading drug and cosmetic manufacturers.

Talk with us at the National Packaging Exposition in Chicago, April 24-27.

BROWN
BAG FILLING MACHINE CO., INC. Fitchburg, Mass.
West Coast Reps., Peter D. Bowley & Assoc., 210 Mississippi St., San Francisco, Calif.

Beats Hand Unloading 2 to 1 From Carton to Conveyor



Styl-O-Matic
UNSCRAMBLING TABLE
(Straight Line Type)

Doubles speed of costly, unsanitary hand lifting of bottles, jars, cans or containers from cartons. One operator can unload from 60 to 240 units per minute from carton onto conveyor.

Handles any size bottles with less danger of breakage—large size jars such as No. 2 and No. 2½ canners jars without jamming or crowding.

Can also be adapted to handle flask type and other irregular or rectangular shaped units.

Users of Styl-O-Matic report; substantial savings in labor costs, increased production.

Send for Bulletin F-26

OTHER ISLAND EQUIPMENT UNITS
Unitized Table • Belt Conveyor • Gravity Conveyor, etc.

ISLAND EQUIPMENT CORP.
27-05 Bridge Palza North Dept. DC-3 Long Island City 1, N. Y.

Faster Filling
OF BOTTLES, JARS, TUBES AND CANS

Use this Anderson Filler, Model C-2, for liquids, semi-liquids, creams, pastes and greases. Dispensing capacity up to one pint per stroke. Fills practically all types of containers . . . jars, bottles, cans or tubes. The machine is fast, easy to operate, sanitary and easy to clean. Write for prices and full details.

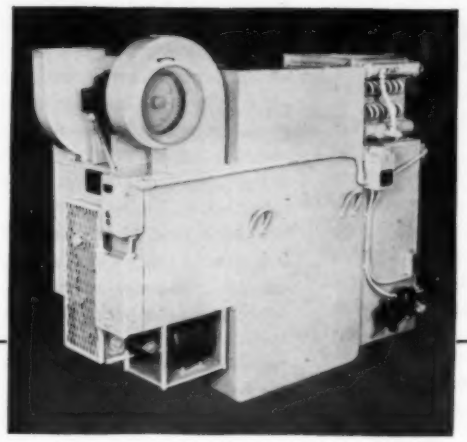
Ask for Bulletin No. 3-24

ANDERSON BROS. MFG. CO.
ROCKFORD, ILLINOIS

Anderson Fillers

HANDLES PASTES, CREAMS, LIQUIDS AND SEMI-LIQUIDS

It's time to start worrying about next summer's high humidities



Summer's on its way sure as shootin'. And when too much moisture in the air starts upsetting your production, it's too late to do much besides grin and bear it. Right now, though, there is something you can do about next summer's high humidities—

Ask Lectrodryer what kind of machine you'll need to help you maintain the air in your processing, storage and packing rooms at constant moisture contents. Our engineers have been answering such questions for years.

Processors who work with "winter weather" the year around have been able to standardize their processes. Production is held at high levels. Products are more uniform and their quality is higher.

Whatever your DRYing problem—air, gases or organic liquids—talk it over with Lectrodryer. PITTSBURGH LECTRODRYER CORPORATION, 309 32nd Street, Pittsburgh 30, Pennsylvania.

In England: Birmingham Electric Furnaces, Ltd., Tyburn Road, Erdington, Birmingham.
In Australia: Birmingham Electric Furnaces, Ltd., 51 Parramatta Road, Glebe, Sydney.

MAIL THIS COUPON → for copies of two Lectrodryer books telling "How" and "Where" DRYing can improve your manufacturing operations.

LECTRODRYER
REGISTERED TRADE MARK U. S. PAT. OFF.

Pittsburgh Lectrodryer Corporation
309 32nd Street, Pittsburgh 30, Pa.

Send "The World Is Sopping Wet" (technical) and "Because Moisture Isn't Pink" (non-technical) to

_____

Title _____

Address _____

_____

PATENT THOUGHTS AND TRENDS

*by Thomas Cifelli, Jr., Patent Attorney**

Background For Revision

The last general revision of the U. S. Patent Laws was way back in 1870. A large number of separate acts of Congress relating to patents has been passed since 1870, with the result that today the patent statutes present a legislative hodge-podge. It was not surprising therefore to learn that a committee of Congress thinks it is time that all of the patent statutes be put into one comprehensive act, as was done with trademarks in 1946.

To start the legislative ball rolling, a preliminary draft of a proposed bill was prepared by the Committee on the Judiciary of the House, for the purpose of inviting suggestions, comments and criticisms relating to amending the patent laws. The Committee states that the draft is intended primarily to serve as a basis for the expression of opinions and that all comments received before May 1, 1950 will be carefully considered for the preparation of a bill to be introduced on the subject in Congress.

Purpose of This Article

Our present concern with this matter has nothing at all to do with purely legal considerations. These considerations are being followed up by various patent attorney groups. However, it seems to go almost without saying that we here are interested in the proposed comprehensive patent bill from the standpoint of being applicants for and owners of patents. In this connection it is well to keep in mind that a number of proposals have been inserted merely as "trial balloons." Consequently, if these proposals are believed to be a step backwards and not forwards, it would seem desirable for anyone feeling strongly about the situation to make his views known to the proper authorities. Otherwise, the proposals might be enacted by default, as it were.

With the foregoing in mind the thought of this article is to present the proposals which would change the patent laws and to disregard the proposals which would merely reenact or codify present patent law. No opinions will be expressed as to the desirability of the proposals amending the patent laws. The reader is left to his own judgment on these matters.

*Newark, N. J.

Patentability of Inventions

It is proposed to bar a U. S. patent if the invention was first patented or caused to be patented by the inventor or his legal representatives or assigns in a foreign country prior to the date of the application for a patent in this country. The present law would bar a patent in such cases only if the foreign patent application were filed more than 12 months prior to the U. S. application, in cases dealing with products, machines, processes, etc., and 6 months in cases of designs.

With regard to the conditions for patentability, it is proposed that patentability shall be determined by the nature of the contribution to the advancement of the art, and not by the nature of the mental processes by which such contributions may have been accomplished. In other words, an objective standard of invention should be employed. While there is nothing in the present state of patent law which seemingly justifies inquiring into the nature of the mental processes of the inventor, this proposal probably stems from the so-called "flash of genius" doctrine and is intended to scotch it.

A new principle of limitations with regard to questions of priority of invention is proposed by specifying that in proceedings in the Patent Office and the courts an applicant for a patent or patentee may not establish, or if established, shall not be credited with, a date of making his invention earlier than two years before the date of his application for patent in the United States.

Applications for Patents

At present, all joint inventors must apply jointly and each must sign the patent application. If it is later found out that a person who is joined should not have been named, it is possible to correct this error. However, it is not now possible to add the name of any inventor to a patent application after the application has been filed. It is now proposed to permit a joint inventor who is not included in an application by error to have his name added to the application, provided such error arose through inadvertence or mistake and without any fraudulent or deceptive intention.

With regard to the term of patents, it is now 17 years from the date of issue, except in the case of re-issue patents, which run for a period of 17 years from the date of the issue of the original patent. It is now proposed to change the term of a patent issued on a continuing application so that it will expire on the same date that the patent, if any, which may have been granted on the earlier application expired. Continuation applications include divisional, substitute and continuation-in-part applications, depending upon whether the second application has been carved out of the first case, is a complete duplicate of the first case, or where new matter has been added in the second case, respectively.

Something akin to the European caveat is contained in the proposed bill which would permit the Commissioner of Patents to accept for deposit and custody descriptions and drawings for subsequent use as evidence of the existence of the papers on the date deposited. At present, the Commissioner would not accept such papers.

Examination of Applications

In spite of the fact that the Patent Office has often been criticized for its method of examining patent applications, it is believed noteworthy that no significant changes are proposed as regards the examination system of the Patent Office.

Interferences

At present, the Patent Office has sole jurisdiction over interferences, which are contests to determine which of two or

more inventors is entitled to a patent. The new bill would permit the courts as well as the Patent Office to have jurisdiction of interferences. This proposal seems to be of interest mainly to the patent attorneys but when it is considered that many laymen cannot understand why patent infringement proceedings are held before non-technical judges, it is believed that these same laymen will be interested in knowing whether patent interferences are to be within the exclusive jurisdiction of the technical experts of the Patent Office or are also to be handled in the future by the same non-technical judges previously referred to.

Issue of Patents

It has already been pointed out that at present the term of all patents is 17 years beginning with the issuance thereof. In addition to the proposal to make continuation patents expire on the same date as the parent patent, it is also proposed to limit the patent term to not more than 20 years (plus such further time to compensate for delays during the pendency of the application not chargeable to the applicant as may be determined by the Commissioner) from the date of filing of the application in the United States, but in no case shall the term of any patent exceed 17 years.

Infringement of Patents

At the present time patent lawyers are quite divided on the question of whether there is anything left to the so-called doctrine of contributory infringement in view of some recent U. S. Supreme Court decisions. If my patent covers a machine comprising two elements A and B and someone makes, uses, or sells such a machine, I can sue him as a direct infringer. However, if someone merely made element A and sold it with knowledge that it was to be combined with element B so as to make the machine of my invention, under the doctrine of contributory infringement I could sue the supplier of element A as a contributory infringer. There is nothing in the statutory law which covers contributory infringement, but it is now proposed to recognize contributory infringement by statutory law, thereby putting to rest all the present controversy as to whether there is any such thing anymore.

Remedies in Infringements of Patents

At present if there are interfering patents the matter can be settled in the federal courts. However, if one person has a broad and dominating patent and another person has a narrow or subordinate patent, there is no way of obtaining a definition of the actual rights of the respective parties. As a practical matter this situation has often been resolved by cross-licensing. Under the new proposals, however, either party could go into court to have the questions of infringement and validity adjudged.

The present law authorizes the marking of patented articles and provides penalties for false markings. However, there is nothing which relates to pending patent applications in the present law. The proposed comprehensive bill would provide penalties for false marking where the designations "patent applied for" and "patent pending" are employed improperly.

Ownership of Patent

At present, joint owners of patents can deal with the patents as if the patents in effect were their sole property, unless the owners have a contract which specifies otherwise. Thus, each joint owner may license or assign his interest in the patent without the consent of the other owner and without proportionately accounting to the other joint owners. However, it is now proposed to require the consent of the other owners and to apportion the proceeds of licenses, etc.

At present, there is hardly anything in the statutory law relating to the subject of valid and invalid conditions in license agreements. It is now proposed to expand Section 3 of the Clayton Act so as to apply to licenses as well as the sales or leases and to follow court decisions in holding such conditions invalid.

With regard to the recording of license agreements, there is nothing in the present law which would require that to be done. However, it is now proposed to require the recording of such instruments.

Novel Items

Perhaps the most important proposals are those in this category.

Revocation or Cancellation of Patents

With regard to the revocation or cancellation of patents, the only way this can be done at present is for the United States to bring a direct action in court, through the office of the Attorney General. The new proposals however would permit revocation by suitable actions in the Patent Office, the revocation proceedings being brought either by action of the Patent Office itself, on petition of interested persons, on motion of the Attorney General, or where the validity of a patent has been raised in a court action involving the patent.

Compulsory Licenses

While there have been numerous legislative proposals for compulsory licenses in the United States, at the present time there is no such actual provision in the law. This whole controversial subject is brought up by proposals to permit compulsory licenses.

According to the present proposal, a patent could be subjected to compulsory license at any time after three years after the date of grant. The grounds for compulsory license would include:

A. Non-working of the patented invention in the U. S. on a commercial scale without reasonable justification;

B. Not meeting the demand for the patented invention in the U. S. to an adequate extent without reasonable justification, or meeting the demand to a substantial extent by importation;

C. Misuse of the patent;

D. Where a decree of a U. S. court under the anti-trust laws declares that the patent shall be available for licensing on reasonable terms;

E. Where the use of the patented invention is necessary for public health or public safety; and

F. Where the licensed applicant is the patentee of an invention of an improvement on the patented invention which cannot be worked without utilizing the patented invention.

Short Term or Minor Patents

At the present time unless one can obtain a so-called mechanical patent (a loose term which includes chemical patents also), or a design patent, he is out of luck. The Judiciary Committee proposes for consideration short term or minor patents, similar to the German Gebrauchmuster patents. There would only be one claim and the patent would run for five years.

Patents of Addition

We have no such patents in this country, unlike Great Britain. It is now proposed to issue such patents, the term of any such patent expiring on the same date as the main patent.

Maintenance of Renewal Fees

Once a U. S. patent is obtained no additional fees need be paid in order to keep it in force for the full 17 year period. It is now proposed to adopt renewal fees in the 5th and 10th years of the patent term. Failure to pay the maintenance fees will result in the termination of the patent right. The fees shall be fifty dollars for the 5th year and seventy-five dollars for the 10th year.

Health Information Foundation

(*Continued from page 267*)

by Dr. Eli Ginsberg, Columbia University economist, and a seventeen-man staff under a $60,000 contract with New York's Joint Hospital Survey and Planning Commission) was completed recently no one could say with assurance just what the hospital facilities of New York State were and to what extent they were satisfactory or deficient. It turned out that the situation is, in the main remarkably good. But deficiencies were revealed and now that there is sufficient knowledge, they will be corrected." Admiral Blandy states, "We will examine the facts about health facilities in relation to population and its distribution. A great deal of information is already available, in one place or another, but it has never been gathered together."

One of the ideas behind the Foundation's establishment is that its findings will cause states, cities, and other communities to realize their needs in regard to health facilities, and that they will be spurred to action in bringing these facilities up to where they should be for the proper maintenance of health. It is felt that this action on the local level will bring greater improvement in the health facilities—and therefore in the health of the nation as a whole.

The purposes of the Health Information Foundation (as stated in its charter) are:

1. To stimulate greater public interest in the progress that has been made by medical science and to encourage still greater gains; and to assure increased availability of medical services throughout the broadly expanding field of medical care, with no sacrifice of quality.

2. To cooperate with all groups concerned with medical care in determining the adequacy of existing medical facilities.

3. To advocate additional provisions, under local auspices, for complete training of more physicians, dentists, pharmacists and allied scientists: for more nurses who are adequately trained; for more diagnostic centers and facilities throughout the country; for increased public health facilities; for increased hospital facilities; and for any other facilities or services not specifically mentioned above but which tend toward more and better distributed health care for all the people, including those who need but cannot afford to pay for it.

4. To assist in the formulation of workable plans and programs for insuring adequate medical care, preventive as well as corrective, for all the people, through cooperation with existing medical and allied health facilities.

5. To collect and distribute information as to methods of protecting individuals and their families, against the financial hardships of sickness and accident by means of individual or group insurance: and to

SACHET JARS — A new collection of containers by the

RICHFORD CORPORATION
251 4th Ave.
New York 3, N. Y.
Samples on request

Left: Oblong—cork-finish closure
Center: Square—C. T. finish closure
Right: Fancy oval—C. T. finish closure

All feature highly polished brass closures and all are immediately available from stock.

encourage and promote organizations to provide health services and hospitalization on a voluntary prepayment basis.

6. To make available to cooperating groups and to the public factual information about our medical facilities and how our people can make better use of them.

7. To receive gifts and otherwise to acquire property, real and personal, subject to such conditions or trusts, not inconsistent with the purposes or restrictions contained in these articles, as may be attached thereto, and to use, operate and dispose of the same by gift or otherwise in such manner as to promote and foster the corporate objects and purposes herein set forth.

8. No part of the net earnings of the corporation shall insure to the benefit of any private shareholder or individual; and no substantial part of the activities of the corporation shall consist of carrying on propaganda or otherwise attempting to influence legislation.

9. In the event of the dissolution of the corporation, its assets remaining after payment of its liabilities and obligations, shall be transferred or conveyed to one or more such corporations, societies, organizations, community chests, funds or foundations, as may be designated by the Board of Directors of this corporation, which are organized and operated exclusively for religious, charitable, scientific, literary or educational purposes, no part of the net earnings of which inures to the benefit of any private shareholder or individual, and no substantial part of the activities of which is carrying on propaganda or otherwise attempting to influence legislation.

Sales versus Research

(*Continued from page 279*)

for a product which had not been proved beyond question. The industry faces an enormous responsibility in raising the hope of the diseased and then casting those hopes into the depths due to a failure of the publicized product to produce results or due to lack of availability. Publicity is a fine thing and must be extensive in educating the public to the contributions of the industry but sales organizations have all too often been decidedly premature in publicizing incomplete research efforts. Here, again, responsibility for publicity should be jointly agreed to by both research and sales and only then approved by management.

Research, the whipping boy of yesterday, is the full-grown equal of today and the giant of tomorrow. Research must and will come into its own and in order for this to happen, sales must abandon some of its hidebound traditionalism. Research is not a tool of sales; research is not a service organization. Research is the only point in the structure of a drug company at which originality and creativeness are vital. Research and the representatives of research must be made partners in the determination of internal developmental policy and in external publicity policy. Research must

(*Continued on page 340*)

WHAT MAKES A PRODUCT *Go Over?*

BASICALLY it depends on product performance! How well it satisfies. How much it induces people to want more and buy again. But finding the formula which wins popular acceptance (and builds repeat business) is no simple task . . . Only thoroughgoing research, teamed up with specialized compounding skill can achieve that goal — **ECONOMICALLY.**

That is why HUNDREDS OF WELL KNOWN FIRMS have turned to Kolar to develop and manufacture their exclusive cosmetic formulas. They know the calibre of service and cooperation they can expect from this well integrated organization and, its rigid policy of protecting formulas . . . Whether your plans call for very simple or complex handling, we will gladly sit down and discuss them with you (confidentially) without obligation.

Write, phone or wire whichever is most convenient.

KOLAR *Laboratories, Inc.*

510 S. Throop Street, Chicago 7, Illinois

(Branch Office: 3711 Davis Street, Cincinnati 11, Ohio)

Private Brand Cosmetic Specialists
Since 1910

YOUR TRADE-MARK RECORD

by John H. Graham
International Patent and Trade-Mark Consultant

Register Your Service Marks Today!

Service marks are quite new to all of us. You will recall that this was one of the most revolutionary points raised by the 1946 Trade-Mark Act when it came into being. What were these service marks to be? How far could the Patent Office be expected to stretch the meaning of the new Act?

Briefly, the newly presented service mark can be identified as a trade-mark used in interstate or foreign commerce in connection with *the sale or advertising of services* to be performed by the owner.

One of the early queries was whether such abstract things as radio program call letters or musical notes would come under the broad interpretation of service marks.

Now, after some two healthy years of practice under the Act, the air has somewhat cleared and we are better able to gauge the limits of such marks.

No actual case has yet reached any tribunal on service marks so we are without legal interpretation. But a complete system has been set up to handle these marks and the Patent Office are regularly registering them.

Certain policies have been adopted by the Patent Office which help us formulate some guide to what might be considered registerable as a service mark. Four basic requirements or factors must be present in a service mark.

First, the applicant-owner must be legitimately engaged in the business of rendering a service to the public; second, this service must be in interstate or foreign commerce; third, the mark must itself be used in such commerce; and fourth, the service must not be incidental only to advertising or sale but should be a definite thing.

While great leniency has been exercised using these basic factors in any selected case some definite acceptances and exclusions exist, which help to show us the path.

The mere call letters of a radio station such as WCBS are *not* considered capable of registration because they are only licensed to the network by the Federal Communications Commissioner. Thus, they cannot give exclusive rights and one of the most vital trade-mark functions, that of exclusiveness is violated.

However, sound marks are considered registrable if they can be described and proposals have been made to so amend the trade-mark rules as to permit a phonograph recording to be placed on file.

In some cases entertainment can be recognized as a service, so that radio performers, actors, etc., can register a mark used for entertaining purposes only. The famous "Duffy's Tavern" which has been registered for a radio show is an example of this.

Hotel and restaurant names may be registered as service marks, if they satisfy the four basic requirements as well as being more than the mere trade name or dress of the owner.

Some actual service marks which have been registered are as follows:

TOTE SYSTEM—for rental of bulk containers for granulated material.

FAMILY HOUR—for the underwriting of life insurance (Prudential Insurance Co.).

SOUTHERN BELLE—for railroad passenger transportation service (Kansas City, R.R.).

TAILORED MUSIC—for distribution of music by wire to offices, stores, etc.

AIRCONOMY PLAN—for air transportation of passengers and freight.

QUALITY CRAFT—for laundry and dry cleaning.

PACKARD—for service, maintenance, etc., of automobiles.

CHAMPAGNE AND ORCHIDS—for radio and television program broadcasting.

HARVELL—for photographic services, etc.

SMALL FRY—for restaurant services.

SHELLUBRICATION—for automobile service.

FOSTERIZED—for pen repair service.

USF—for finishing textile fabrics.

MIRASPUN—for decorative metal finishes, on lipstick holders, etc.

WE MEND ALL BUT BROKEN HEARTS—for repairing china, jewelry, bric-a-brac, etc.

GOBBLER BAR—for purveying of foods, beverages, etc.

BOONE COUNTY JAMBOREE—for radio program broadcasting.

Finally, as proof of the use of sound, National Broadcasting Co., have very recently obtained registration as follows:

"The mark comprises the musical notes G.E.C. played on chimes," for broadcasting of radio programs, used since November, 1927.

From these examples it will be seen that a service mark can be very important. You may be hiding, amongst your selling equipment, a good service mark which could be registered.

As these marks receive more publicity and as the classes for them begin to swell, more and more people will adopt them.

The time to consider if you have a good service mark or would like to coin one is now, while the field is open. Any

mark which answers the four basic factors given stands a good chance of registration today.

The following Trade-Marks were recently published in the Official Gazette of the United States Patent Office.

Amber Lite—51—C—564,228
Coty, Inc., N. Y., N. Y.
Ser. Jan. 17, 1948 D. U. Nov. 26, 1947

"Athletic Aroma"—51—D—510,996
The Barbasol Co., Indianapolis, Ind.
Ser. Oct. 17, 1946 D. U. Oct. 3, 1946

A Vos Ordres—VI—BC—571,359
S.A.P. Forvil & Dentifrices Du Docteur Pierre Reunis, Nanterre, France
Ser. Dec. 30, 1948 D. U. May 17, 1938

Baby Face—51—C—554,232 (And Des.)
Harry H. Klein, Camden, N. J.
Ser. April 9, 1948 D. U. March 1947

Baiser Du Faune—51—BC—552,212
Benard & Honnorat, DBA Molinard, Grasse, France
Ser. March 18, 1948 D. U. May 2, 1933

Beau-Time—51—B—563,928
Interstate Sales Co., Waco Texas
Ser. Aug. 24, 1948 D. U. July 9, 1946

Bridal Pink—51—C—533,862
Lady Esther, Ltd., Chicago, Ill.
Ser. Sept. 9, 1947 D. U. Jan. 2, 1945

Burnt Sugar—51—CE—571,249
Avon Products, Inc., N. Y., N. Y.
Ser. Dec. 29, 1948 D. U. Dec. 14, 1948

Cadillac—51—B—570,695
Joseph Cowan, N. Y., N. Y.
Ser. Dec. 17, 1948 D. U. Dec. 1, 1948

Cheer—52—M—575,487
The Procter & Gamble Co., Cinn., Ohio
Ser. March 15, 1949 D. U. March 3, 1949

Citrosynth—VI—M—564,103
Florasynth Labs., Inc., N. Y., N. Y.
Ser. Aug. 25, 1948 D. U. July 13, 1945

Clarice Wilson—51—H—565,466
Clarice Wilson, Orange, N. J.
Ser. Sept. 18, 1948 D. U. Aug. 26, 1948

Conquest—51—B—506,059
Dorothy Perkins Co., St. Louis, Mo.
Ser. July 22, 1946 D. U. June 1932

Coy Siren—51—C—533,863
Lady Esther, Ltd., Chicago, Ill.
Ser. Sept. 9, 1947 D. U. Aug. 23, 1947

Cream Wafer—51—C—519,549
Revlon Products Corp., N. Y., N. Y.
Ser. Sept. 2, 1948 D. U. May 14, 1946

Crimson Bronze—51—C—533,865
Lady Esther, Ltd., Chicago, Ill.
Ser. Sept. 9, 1947 D. U. July 11, 1947

Dans La Nuit—51—B—568,110
Les Parfums Worth De Paris, Inc., N. Y., N. Y.
Ser. Nov. 3, 1948 D. U. Dec. 3, 1920

Dig—52—M—567,693
Patrick R. Gibbons Co., St. Louis, Mo.
Ser. Oct. 27, 1948 D. U. June 1, 1948

Duo-Vis—51—H—556,459
G. Lucchese, DBA Rexvis Products Co., Chicago, Ill.
Ser. May 7, 1948 D. U. Dec. 1, 1947

Enticing—51—BC—528,949
Eisenberg & Sons, Inc., Chicago, Ill.
Ser. July 19, 1947 D. U. April 1, 1944

Ever-Dry—51—D—571,127
Ever-Dry Corp., Los Angeles, Calif.
Ser. Dec. 27, 1948 D. U. Sept. 6, 1929

Faime—52—H—563,847
L. J. Feldman, Dba Allied Pharmetics Co., Plainfield, N. J.
Ser. Aug. 23, 1948 D. U. April 15, 1946

Faircrest—51—ACHIKM—536,368
The Fair, Chicago, Ill.
Ser. Oct. 1, 1947 D. U. Dec. 31, 1939

Geraldine Craux—51—C—571,112
J. A. Prado Bravo, DBA Geraldine Craux, N. Y., N. Y. and Havanna, Cuba
Ser. Dec. 27, 1948 D. U. Sept. 27, 1946

Gold Leaf Shampoo—52—H—510,958
Kajol Inc., San Francisco, Calif.
Ser. Oct. 16, 1946 D. U. April 1945

Harf Delite—52—H—539,157
Harf Inc., Hilltown, Pa.
Ser. Oct. 27, 1947 D. U. Sept. 15, 1939

Hex—51—D—522,891
J. B. Nethercutt, DBA Nethercutt Labs., Santa Monica ,Calif.
Ser. May 23, 1947 D. U. May 9, 1947

House of Caroline—51—C—544,852
The Cook Coffee Co., DBA House of Caroline, Cleveland, Ohio
Ser. Dec. 19, 1947 D. U. Nov. 1, 1947

Hymenee—51—BC—571,360
S.A.P. Forvil & Dentifrices Du Docteur Pierre Reunis, Nanterre, France
Ser. Dec. 30, 1948 D. U. Dec. 9, 1941

I Remember Mama—51—B—560,805
Dorothy Gibson Perfumes Corp., N. Y., N. Y.
Ser. July 7, 1948 D. U. June 1, 1948

Iris—37—M—565,730
Sitroux Inc., N. Y., N. Y.
Ser. Sept. 23, 1948 D. U. July 9, 1948

Jean Patou—51—ABCH—566,340
Jean Patou, Inc., N. Y., N. Y.
Ser. Oct. 2, 1948 D. U. Nov. 5, 1930

Junior Guild—51—BC—486,682
Junior Guild Frocks, Inc., Chicago, Ill.
Ser. May 12, 1949 D. U. June 14, 1945

Kleen-Dent—51—K—567,109
M. L. Axelrod, DBA Cleanser Materials Co., Miami, Fla.
Ser. Aug. 23, 1948 D. U. Sept. 15, 1947

La Gloria—52—A—560,466
The Hewitt Soap Co., Inc., Dayton, Ohio
Ser. June 20, 1948 D. U. Oct. 25, 1930

Lait des Hesperides—51—BC—545,267
Lancome., S.A. Paris, France
Ser. Dec 23, 1947 D. U. June 16, 1942

Lanolip—18—C—544,141
Botany Mills, Inc., Passaic, N. J.
Ser. Dec. 12, 1947 D. U. Nov. 26, 1947

Les Yeux Doux—51—BC—571,361
Forvil & Dentifrices Du Docteur Pierre Reunis, Nanterre, France
Ser. Dec. 30, 1948 D. U. May 2, 1941

Louisy—51—ABCEH—546,080
Guichard-Perrachon & Cie, St. Etienne, France
Ser. Dec. 30, 1947 D. U. Jan. 22, 1923

Lucien Lelong—51—BC—530,220
Lucien LeLong, Inc., Chicago, Ill.
Ser. Aug. 1, 1947 D. U. Dec. 1928

Marisol—51—C—557,771
Perfumeria Gal, S. A. Madrid, Spain
Ser. May 25, 1948 D. U. April 15, 1930

Moisture Oil—51—C—570,467
Elizabeth Arden Sales Corp., N. Y., N. Y.
Ser. Dec. 14, 1948 D. U. Aug. 18, 1947

My-Cy—VI—D—559,557
E. O. Sowerwine, DBA Chemspecs Lab. Cranford, N. J.
Ser. June 17, 1948 D. U. May 10, 1948

Norelco—21—R—570,871
North American Philips Co., Inc., Dobbs Ferry, N. Y.
Ser. Dec. 20, 1948 D. U. Oct. 1, 1948

Oh! Oui Paris—51—B—520,402
Jean-Pascal Lorriaux & Cie., Paris, Fr.
Ser. April 9, 1947 D. U. Oct. 30, 1946

Peer—23—R—547,344
Hammel, Riglander & Co., Inc., N. Y., N. Y.
Ser. Jan. 17, 1948 D. U. Since 1923

Pond's—51—C—587,205
Pond's Extract Co., N. Y., N. Y.
Ser. Nov. 2, 1949 D. U. Since 1846

Remini Scent of Hawaii—51—B—521,-018
G. T. Leman, DBA Toni Baxter, Honolulu, Hawaii
Ser. April 19, 1947 D. U. July 24, 1946

Requete Worth—51—B—514,663
Les Parfums Worth De Paris, Inc., N. Y., N. Y.
Ser. Dec. 21, 1946 D. U. Dec. 7, 1944

Soapmobile—52—A—549,245
The Hewitt Soap Co. Inc., Dayton, Ohio
Ser. Feb. 10, 1948 D. U. Jan. 15, 1948

Star Fire—51—BC—561,290
Campana Sales Co. DBA, Old South Perfumers, Batavia, Ill.
Ser. July 14, 1948 D. U. Jan. 13, 1948

Stephan's—51—H—555,319
Stephan Products Inc., Worcester, Mass.
Ser. April 22, 1948 D. U. April 2, 1948

Subath—52—A—569,453
The Hewitt Soap Co., Inc., Dayton, Ohio
Ser. Nov. 26, 1948 D. U. Oct. 25, 1948

Sun Gold—51—CEF—549,869
Elizabeth Arden Sales Corp., N. Y., N. Y.
Ser. Feb. 17, 1948 D. U. Jan. 20, 1948

Tabasan—51—K—570,427
Miles Labs., Inc., Elkhart, Ind.
Ser. Dec. 13, 1948 D. U. Nov. 22, 1948

Tesoro—52—A—571,493
The Procter & Gamble Co., Cinn., Ohio
Ser. Dec. 30, 1948 D. U. March 5, 1913

The Golden Bar With The Clean Naphtha Odor—52—A—556,789
Fels & Co., Phila. Pa.
Ser. May 11, 1948 D. U. Since 1923

Tina Bishop—51—CDH—555,409
John M. Henderson Co., Inc., Los Angeles, Cal.
Ser. April 23, 1948 D. U. March 1, 1948

Tre Teste—51—AI—517,231 (And Des.)
Arnoldo Pacifici, Rome, Italy
Ser. Feb. 10, 1947 D. U. June 1945

Trutype—44—K—540,792
The Dentists' Supply Co. of New York, N. Y., N. Y.
Ser. Nov. 12, 1947 D. U. June 1920

Vir—52—H—557,786 (And Des.)
United International Research, Inc., Newark, N. J.
Ser. May 25, 1948 D. U. Since spring of 1942

Vibrazor—23—R—570,315
New Electric Razor Corp., Baltimore, Md.
Ser. Dec. 10, 1948 D. U. Oct. 6, 1948

Whiz-Fizz—VI—D—556,183
Harden Chemical Co., Inc., Middletown, N. J.

Act of 1946

The following Trade-Marks have been recently republished under the terms of the above (Lanham Act). No opposition can be filed against them but they are all subject to cancellation proceedings.

Aerogene—51—TG—345,734
Reg. May 4, 1937 to Eugene, Ltd., N. Y., N. Y.
Repub. by registrant

Barr's Mechanic—IV—M—50,071
Reg. Mar. 6, 1906 to Iowa Soap Co., Burlington, Iowa
Repub. by registrant

Big 4—52—A—186,344
Reg. July 8, 1924 to Iowa Soap Co., Burlington, Iowa
Repub. by registrant

Blue Waltz—51—BCI—263,019
Reg. Oct. 29, 1929 to Joubert Cie, Inc.
Repub. by The Nestle Le-Mur Co., N. Y., N. Y.

Chex—52—A—192,746
Reg. Dec. 9, 1924 to the Pioneer Products Co.
Repub. by the Hewitt Soap Co., Inc., Dayton, Ohio

Galve—18-51-52—ABCDEHKM—238,246
Reg. Jan. 31, 1928 to Arthur Winarick, present address Bronx, N. Y.
Repub. by registrant

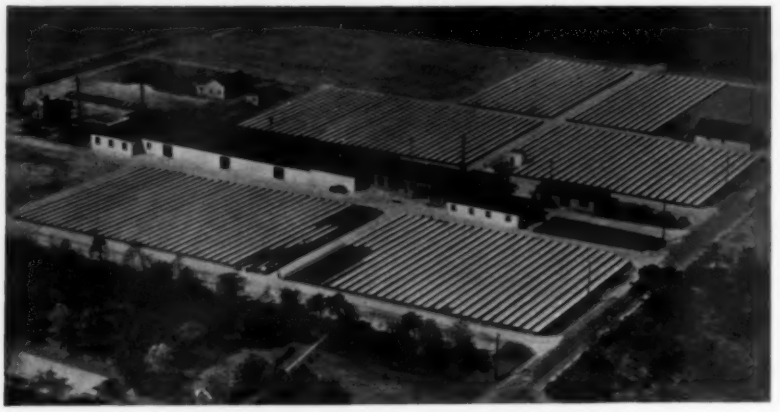
Hawkeye—52—A—102,880
Reg. Feb. 23, 1915 to Iowa Soap Co., Burlington, Iowa
Repub. by registrant

KOSTER KEUNEN

★

BEESWAX

U. S. P. Pure Sunbleached
U.S.P. Pure Yellow Refined



Office and Refinery: Sayville, N. Y.

MICRO-CRYSTALLINE PETROLEUM WAXES

OZOKERITE • SPECIAL WAX BLENDS • CERESINE

Ask for samples, prices and technical data

KOSTER KEUNEN • • • • SAYVILLE, N. Y.

PHONE: SAYVILLE 400

KESSCO PRODUCTS

CHEMICAL SPECIALTIES

EMULSIFIERS

of Definite Specifications

GLYCERYL MONO STEARATE
PURE AND SELF-EMULSIFYING

KESSCO WAX A-21
FOR ANTI-PERSPIRANTS, DEODORANTS, OINTMENTS

PROPYLENE GLYCOL MONO STEARATE
PURE AND SELF-EMULSIFYING

new

POLYMERIZED GLYCOL STEARATES, LAURATES, OLEATES, ETC.

for

PHARMACEUTICALS, TOILETRIES, COSMETICS ETC.,

EST. 1921

KESSLER CHEMICAL CO., INC.

STATE ROAD and COTTMAN AVE. • PHILADELPHIA 35, PA.

INDUSTRY'S BOOKS

Authoritarianism and the Individual, by Harold W. Metz, and Charles A. H. Thomson, 371 pp., The Brookings Institution, Washington, D. C., $3.50.

The whole world is torn by a struggle over the basic principles underlying free societies and controlled societies. This is emphasized ever more crucially by the arguments of those within customarily free societies who would give aid and comfort to the philosophies of the dictators, as opposed to those who hold to the values and principles of freedom for all individuals. In this absorbing account of the endless struggle between power crazed totalitarian groups and freedom loving individuals, political scientists and students of world affairs will find the questions raised in regard to feudalism, the absolute monarchies, communism, facism, national socialism, and the idealistic controlled communities in America answered with convincing clarity.

Acute Appendicitis and Its Complications, by Frederick Fitzherbert Boyce, M.D., Diplomate of the American Board of Surgery, Assistant Professor of Clinical Surgery, Tulane University of Louisiana, 487 pp., Illus., Oxford University Press, New York, $8.75.

There already exist excellent monographs on appendicitis, but this is probably the first work to deal exclusively with the subject of acute appendicitis. This book is written from the point of view that acute appendicitis is an inherently serious, extremely urgent, potentially deadly disease. The entire presentation derives from that concept. The background of the book is furnished by 6,441 surgical cases of acute appendicitis which were treated at Charity Hospital of Louisiana at New Orleans in the 15 year period ending in December 1945, and which the author has been studying serially since 1933.

Digitalis and Other Cardiotonic Drugs, by Eli Rodin Movitt, M.D., Chief of Medicine, Veterans Administration Hospital, Oakland, Calif., Second Ed., 245 pp., Illus., Oxford University Press, New York, $5.75.

Digitalis, with its derivatives, holds an unchallenged position in the field of therapeutics. Although one of the older remedies known, it is still indispensable in the practice of medicine. Its importance is further emphasized by widespread usage. With the growing trend toward longer life expectancy, more people are reaching the age group where the degenerative type of heart disease is prevalent. This tendency still further enhances the usefulness of digitalis. It is obvious that a thorough knowledge of this important therapeutic agent is essential to both the general practitioner and the specialist. Its therapeutic application is subject to a variety of modifying conditions. All the implications of such qualifying factors must be clearly understood for the judicious use of the drug. There has accumulated to date voluminous literature on the subject. However, more recently some of the concepts of digitalis therapy have undergone certain changes. With the introduction of new purified cardiac principles, the therapeutic possibilities have been enlarged. It is the purpose of this book to present recent advances in digitalis therapy along with a general discussion of the subject.

Antibiotics, by Robertson Pratt, Ph.D., Associate Professor of Pharmacognosy and Plant Physiology, University of California College of Pharmacy, and Jean Dufrenoy, D. Sci. (Paris), Research Associate in Antibiotics, University of California College of Pharmacy, 255 pp., 66 Illus., J. B. Lippincott Co., Phila., $5.

The purpose of this book is to present in a succinct, integrated plan the facts and principles of fundamental and permanent value relating to antibiotics. Much of this information is now widely scattered in thousands of publications embracing the vast scientific literature of the subject. Some of it is derived from the authors' own researches in this field published over a period of years. The object has been, first, to give an understanding of the fact that, in developing chemical therapy by means of antibiotics, man has merely adapted to his own ends the capacity that certain microorganisms possess to wage a war of extermination against other microorganisms, and, second, to present a general survey of the principles involved in the industrial, commercial, pharmaceutical, and medical aspects of the field of antibiotics.

Organic Syntheses, Vol. 29 of the series, 119 pp., John Wiley & Sons, Inc., New York $2,50.

This is an annual publication of satisfactory methods for the preparation of organic chemicals. Table of Contents: 1-Acetylcyclohexene, Acrylic Acid, m-Aminobenzaldehyde Dimethylacetal, 5-Amino - 2,3 - Dihydro - 1,4 - phthalazinedione, b-Benzoylacrylic Acid, a-Bromopheptaldehyde, tert-Butylamine and tert.-Butylamine Hydrochloride, Catalyst, Raney Nickel, 4-Chlorobutyl Benzoate, 2-Chloromethylthiophene, y-Chloropropyl Acetate, 2,6 - Dichlorophenol, a, a-Diphenylacetone, Ethyl B-Anilinocrotonate, Ethyl 2-pyridylacetate, 1-Ethynylcyclohexanol, Homophthalic acid and Anhydride, b-(2-Hydroxyethylmercapto) Propionitrile, Indazole, Isoprene Cyclic Sulfone, Methacrylamine, m-Methoxybenzaldehyde, 1-Methylaminoanthraquinone, 1 - Methylamino - 4 - Bromoanthraquinone, 2 - Methyl-4-Hydroxyquinoline, m-Nitrobenzaldehyde Dimethylacetal, p-Nitrobenzonitrile, 5- Nitro -2,3- Dihydro- 1, 4-phthalazinedione, Oleyl Alcohol, a-Phenylcinnamonitrile, Protocatechuic Acid, 2-Thiophenealdehyde, 1,2,5-Trihydroxypentane, Trimethylene Oxide.

Announcing

SOAPS and DETERGENTS

by Thomssen and McCutcheon

CONTENTS

1. Raw Materials
2. Machinery and Equipment
3. Soap Making Methods
4. Soap Products
5. Perfuming and Coloring
6. Glycerine and Recovery
7. Synthetic Detergents
8. Analytical Methods

512 Pages **66 Illustrations**

$9.00 (U.S.A.)

$9.50 (Canada & Foreign)

BOOK DEPT.

DRUG & COSMETIC INDUSTRY

101 W. 31st St., New York 1, N. Y.

COMPOUNDER'S CORNER

Lipstick Production and Casting

According to A. G. Arend (*Perf. & Essent. Oil Rec.* 40:392, 1949) the main trend of research in lipstick manufacture appears to be directed toward further perfection of the casting system. The extrusion method, while holding specific advantages in more rapid production, and requiring less labor, necessitates the most exacting control, and this can be marred by the slightest inaccuracy. Some of the waxes usually included cannot be considered when using this method, as the high pressure exerted results in the production of a granular effect, while others drag, and do not provide a true stick form. By the ordinary casting system a common practice is to "flame" the finished stick so as to produce a glossy and uniform surface, but this is superfluous with the extrusion method. Nonetheless, and despite considerable research, the casting process still remains the most popular.

Arend points out that the use of beeswax ensures the production of a solid mass out of the casting mold, but to forestall any dragging careful blending with other constituents is essential. The gloss is improved by addition of mineral oil, which is usually recommended at a viscosity of about 200° C., rigidity is imparted and the melting-point further raised by the addition of carnauba wax. With the extrusion process also the use of lanolin lessens any undue effect brought about by sudden changes of temperature or pressure. The mineral oil can take the form of pure paraffin oil (of 0.860 sp. gr.) and is, of course, deodorized. This is usually recommended to be at a maximum of 15 per cent of the composition, but reference to earlier literature between the two war periods shows that nearer 30 per cent was sometimes used. Normally, the lanolin addition ranges from 10 to 15 per cent, depending on other constituents present, and simply functions as a blender and for the manipulation of any unexpected changes in procedure, but some lipstick formulations omit lanolin altogether. Another stiffening agent is ceresin, frequently limited in modern compositions to from 20 to 25 per cent, but earlier indelible lipsticks and daylight sticks contained up to 35 per cent. Granulation is evident where cocoa butter is included up to about 10 per cent, and thus necessitates a rapid chilling of the molds. The melting-point of the mass can also be raised by addition of ozokerite, while permeation of the soluble colors is assisted by small additions of wetting agents, such as the sodium salts of lauryl sulphate, and succinates, such as dioctyl-sulphosuccinate, etc.

Upon setting, says Arend, a lipstick composition should chill quickly and part from the molds in sticks which do not necessitate trimming. Some preparations are made in stick-molds immersed in an ice-box, especially where cocoa butter is included. On the other hand, some of the mixtures made up with some 45 per cent ceresin and the remainder mainly of mineral oil are cast quite easily, but in practice they do not adhere well. Additions of 10 per cent each of lanolin and beeswax can remove the oily appearance, and yet retain this ease in casting. Some of the larger lipstick makers have an improved refrigerator or portable ice-making machine.

In Arend's opinion the regular process of manufacture itself does not appear to have been improved very much, and comprises first of all dissolving or dispersing the coloring material in castor oil, and any other solvent used, adding the lauryl or sulpho-succinate as wetting agents. The waxes, heated a few degrees above their melting-point, are then added, and finally the liquid oils, and low melting-point fats with the pigment. This work is done either in a colloid or a jacketed mill, and after mixing thoroughly until fully uniform, the mass is allowed to cool down to some 10° C. above setting point. After pouring into molds and chilling rapidly, the cast sticks are checked and given any slight trimming necessary, and then wrapped or placed into their holders ready for marketing and distribution. The amount of perfume included has been quoted at 2 per cent, but in practice rarely exceeds 1 per cent, and this applies equally to rose otto, vanillin, heliotropin, linalyl cinnamate, benzyl propionate, anisic aldehyde, etc.

Hair Wave Capsules

A method of making hair wave capsules containing the more familiar ingredients is suggested in *The Chemist and Druggist* (152:806, 1949). Here it is stated that the following formula gives a preparation suitable for packing in gelatin capsules, which, on dissolving in water, produce a hairwaving solution:

Gum acacia	**15**
Gum tragacanth	**10**
Borax	**20**
Sodium sulphite	**10**
Boric acid	**45**
Perfume	**Sufficient**

Each capsule should contain at least 2 Gm. of the mixed material; this amount to be dissolved in a small cupful of hot water. The solution is combed into the hair and allowed to dry without further treatment.

Germicidal Efficiency of Ethyl Alcohol

In the conference on the mechanism and evaluation of antiseptics held in 1949 by the Section of Biology of the New York Academy of Sciences, H. E. Morton presented some new and pertinent data on the relationship of concentration and germicidal efficiency of ethyl alcohol. He pointed out that knowledge of the bactericidal action of varying concentrations of ethyl alcohol is important because of the frequent uses of ethyl alcohol to degerm skin prior to hypodermic injections and as a vehicle for many proprietary preparations marketed as skin disinfectants. In spite of its extensive usage, effectiveness of ethyl alcohol appears to be misunderstood. In general, textbooks on bacteriology state that 95 per cent ethyl alcohol is not a good disinfectant. The germicidal action is increased, however, if the concentration is reduced to 60-70 per cent. The wide-spread use of 95 per cent ethyl alcohol as a disinfectant would not seem justified if the impressions gained from the statements in the textbooks are true. The germicidal action of ethyl alcohol in varying concentrations was reinvestigated.

In laboratory investigations one-half milliliter portions of the culture under test were placed in sterile test tubes,

centrifuged, the supernate discarded and the alcoholic solution under test mixed with the bacterial cells. One drop of the germicide-culture mixture was subcultured to appropriate media after varying intervals of exposure. *Escherichia coli*, *Salmonella typhosa*, and *Serratia marcescens* were killed in 10 seconds or less by concentrations of ethyl alcohol of 100 to 40 per cent by volume. *Pseudomonas aeruginosa* was killed in 10 seconds or less by concentrations of 100 to 30 per cent by volume. Fifty and ninety seconds were required to kill *Staphyloccocus aureus* and *Streptococcus pyogenes*, respectively, by absolute ethyl alcohol. The organisms were killed in 10 seconds or less by concentrations of 95 to 60 per cent. Forty-eight hours were required to kill a 24 hour old broth culture of *Bacillus anthracis* by concentrations of alcohol of 100 to 50 per cent.

Hence, says Morton, from the wide range of concentrations in which ethyl alcohol destroys the moist vegetative forms of bacteria, it appears that too much emphasis has been placed on the import of diluting alcohol to a certain effective concentration.

Incompatibility of Vitamins B_{12} and C

W. C. Gakenheimer and B. A. Feller (*J. Am. Pharm. Assoc.*, Scient. Ed. 38: 660, 1949 report that in the course of investigating the pharmaceutical properties of vitamin B_{12}, a very pronounced incompatibility, between this vitamin and ascorbic acid was discovered. Assay results of solutions containing ascorbic acid and vitamin B_{12} (crystalline or concentrate) indicated more than 50 per cent decomposition of the vitamin B_{12} after storage at 28° to 30° for twenty-four hours, as determined by the cup-plate assay procedure, utilizing *Lactobacillus lactis Dorner* as the test organism. The assays of control solutions containing no ascorbic acid indicated no vitamin B_{12} decomposition. In addition, it has been observed that the presence of 0.5 per cent phenol does not significantly alter the rate of vitamin B_{12} decomposition resulting from its incompatibility with ascorbic acid.

PABA as a Sunburn Preventive

Medical opinion with regard to the value of one material as a sunburn preventive is given in the *Journal of the American Medical Association* (142:298, 1950). Here it is stated that para-aminobenzoic acid (PABA) currently is thought to be the most satisfactory of the sunburn preventives because it is colorless, odorless, readily miscible in different types of vehicles and is less likely than tannic acid, quinine or phenyl salicylate to produce irritation of the skin. On rare occasions, it, too, is capable of provoking contact dermatitis. PABA is usually used in concentration of 15 per cent incorporated in almost any convenient vehicle — vanishing cream, cold cream, emulsion base or 70 per cent alcohol.

Foot Preparations

If the feet ache, says H. Janowitz (*Soap, Perf. & Cosmetics* 22:1231, 1949), it is logical to recommend the use of a foot bath. Because a weak alkali helps to soften the skin, sodium carbonate finds appropriate use in foot bath preparations, like the following:

Methyl salicylate	**6.0 parts**
Potassium iodide	**0.5 parts**
Sodium carbonate	**93.5 parts**
Fluorescein	**sufficient**

After the feet have been bathed and dried, they can be massaged with a suitable foot cream. Janowitz suggests that a medicated type of composition be used throughout as a perfume, as it also has a stimulating effect. A typical medicated composition for the purpose would consist of 88 parts of methyl salicylate, 2 parts of menthol and 10 parts of camphor. If properly formulated, the resulting cream can also be used in mild cases of frostbite. The following formula affords some idea of such a preparation:

Beeswax	**6.0 parts**
Soft petroleum jelly	**68.0 "**
Zinc oxide	**15.0 "**
Boric acid	**5.0 "**
Medicated composition (as above)	**6.0 "**

Melt the beeswax with soft paraffin, mix in the medicated composition, then add the sifted powders; when nearly cold, run through an ointment mill.

Another foot massage cream can be made from:

Lanolin absorption base	**35.0 parts**
Medicated composition	**5.0 "**
Water	**59.8 "**
Magnesium sulphate	**0.2 "**

Mix the absorption base with the medicated composition and work slowly in the water in which the magnesium sulphate has been previously dissolved. It is essential that the aqueous solution be added in small proportions, each adequately incorporated.

Janowitz mentions that the equipment of the soldiers in one European army contained a product devised to protect the user's feet against the abrasive callous-forming action of heavy marching. It consisted simply of salicylic and benzoic acids in a mutton tallow base, the latter being sometimes stiffened up with wax. A similar but more elegant foot salve can be made on the following lines:

Stearic acid	**30 parts**
Paraffin, soft white	**10 "**
Beeswax, white	**15 "**
Mineral oil	**42 "**
Salicylic acid	**2 "**
Benzoic acid	**1 part**

The fats are melted on a water-bath and the acids mixed in with constant stirring. The product is poured into suitable molds.

With respect to foot powders, they are said to be essentially similar to ordinary talcum and body-dusting powders, but are usually somewhat heavier in texture. The perfume may be the medicated composition previously suggested or something of a related character. Some powders merely contain a trace of menthol. The following formula is indicative:

Talc	**60-80 per cent**
Zinc oxide	**10-20 " "**
Zinc stearate	**2-5 " "**
Magnesium carbonate	**3-10 " "**
Perfume color	**sufficient**

Brief consideration is also given to medicated foot creams which are used in the treatment of eczemas of the foot, so-called athlete's foot and similar conditions. One such cream, developed by Janowitz, is made from:

Petroleum jelly	**50 parts**
Mineral oil	**24 "**
Carbolic acid cryst	**2 "**
Precipitated sulphur	**4 "**
Camphor	**2 "**
Ammonium sulphoichthammate	**2 "**
Lanolin	**16 "**

Powder Cream

According to a note in the *Chemist and Druggist* (152:475, 1949) a powder cream may be made by means of the following formula:

Stearic acid	**50 parts**
Oleic acid	**10 "**
Potassium hydroxide	**215 "**
Water	**200 "**

When the cream is made, incorporate:

Talc, in fine powder	**50 parts**
Perfume	**sufficient**

THERE IS NOTHING BETTER THAN

Italian TALC

The Standard for Over 50 Years

Italian Talc is, and always has been, the recognized standard in the cosmetic industry. Throughout the world users of talc turn to Italy where the natural rockstone produces a superfine product. It combines in the highest degree the features most desired. It has an unusual, silky texture.

The world's leaders use only Italian Talc.

CHARLES MATHIEU, INC.

77 RIVER STREET, HOBOKEN, N. J.

Representatives in the United States and Canada of the Italian Producers
Our Representative in Canada: Standard Chemical Company, Ltd.,
Leaside, Toronto 17, Ontario

WE ARE THE EXCLUSIVE U. S. REPRESENTATIVES FOR THESE WORLD-FAMOUS BRANDS

CITRUS OILS

and

JASMIN CONCRETE

Distilled by the Renowned

FSCO DE PASQUALE FU SANTI

Established 1840

MESSINA, ITALY

HINTERSEBER'S

OILS OF

PINE PUMILIO

and

ABIES PECTINATA

Distilled by

JOSEF WURTH

IMST and FERNPASS

IN THE AUSTRIAN TYROL

GENUINE

Highest Concentrated

JUICES

and

FLAVORS

OF UNSURPASSED AROMA

By

T. NOIROT & CIE.

NANCY, FRANCE

Producer of the World's Finest Genuine Juices, Flavors and Distilled Concentrates

AROMATIC CHEMICALS AND COMPOUNDS "COURTIER"

PROMPT DELIVERY FROM OUR NEW YORK WAREHOUSE — SAMPLES AND PRICE LIST ON REQUEST

WILLIAM A. HOFFMAN, INC.

EXCLUSIVE DISTRIBUTORS

366 BROADWAY, NEW YORK 13, N. Y.

ADVANCING THERAPY

New Drug for Tuberculosis

On February 7, at a meeting of the American Drug Manufacturers' Association, C. E. Dutchess reported that "Tibione" (Schenley Laboratories, Inc.), a newly discovered German drug, has shown "very great usefulness" in many chronic tuberculosis cases. The new drug appears destined to join streptomycin and para amino salicylic acid (PAS), Dutchess said, in the struggle to overcome tuberculosis. Tibione now is being studies by leading U. S. tuberculosis investigators at 24 Veterans' Administration hospitals and by other key laboratories and hospitals. These tests follow wide use of the drug in Western Germany, where some 10,000 patients were treated over a two-year period.

Results in Germany were described by Dutchess as "most impressive" in regard to some forms of the disease, particularly in certain serious complications of extensive tuberculosis of the lungs, of the larynx and of the intestinal tract. However, the drug has neither the rapid or dramatic effect of streptomycin. Nor does it appear to be effective in two very serious, but relatively uncommon, forms of tuberculosis —miliary tuberculosis and tuberculosis meningitis. Dutchess said medical experts believed Tibione's outstanding characteristic is that its administration can be continued for extensive periods without the toxic reaction that occurs when streptomycin is used for prolonged periods. If, as now indicated, tuberculosis germs do not develop resistance to Tibione and the drug does not produce serious toxic effects, it could be depended on to fight the germs for many months of treatment.

In German medical literature the drug is known as TB-1-698 (TB one). The trade name in Germany is "Conteben." Chemically, it is 4-acetyl-amino benzaldehydethio semicarbazone. It is completely unrelated to streptomycin and only distantly related chemically, to PAS and the sulfones.

Three reports by German workers on the characteristics and action of this drug appear in the January, 1950 issue of the *American Review of Tuberculosis*. The same issue also contains a comprehensive summation by and the recommendations of H. C. Hinshaw and W. McDermott, who went to Germany last fall to study the product. It should also be noted that the drug will also be available in the United States under the name "Myrizone" (E. R. Squibb & Sons).

Effects of ACTH Therapy

In the *Journal of the American Medical Association* (141:1273, 1949) J. R. Elkinton and his associates state that the discovery of the dramatic improvement in rheumatoid arthritis induced by the administration of certain steroids of the adrenal cortex and adrenocorticotropic hormone (ACTH) of the pituitary has provided a clue to the pathogenesis of a wide variety of related diseases. These workers clearly established that 17 - hydroxy - 11 - dehydrocorticosterone (Kendall's compound E, or cortisone), 17 hydroxycorticosterone (compound F) and pituitary adrenocorticotropic hormone produced immediate remissions in the disease, remissions which lasted as long as these substances were administered. Improvement was also obtained in patients with acute rheumatic fever. Since this report appeared other investigators have confirmed these observations and widened the scope of disease states in which adrenocortical hormones are efficacious. One group has reported the successful use of pituitary adrenocorticotropic hormone in 9 patients with rheumatoid arthritis, 3 with rheumatic fever, 3 patients with disseminated lupus erythematosus and 1 with gout. Rheumatoid arthritis has also been reported to have responded with good results to cortisone and to pituitary adrenocorticotropic hormone.

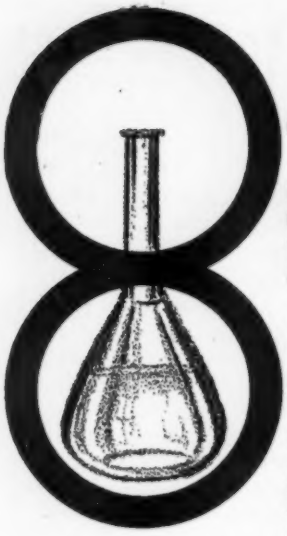
However, as was well indicated in a recent conference on ACTH, there is a great deal to be learned concerning the substance. As pointed out by Elkinton and his coworkers, this conference made two facts apparent: (1) that the fundamental process by which adrenal cortical steroids affect these diseases is unknown and unmeasured in terms of the known metabolic functions of the adrenal cortex, and (2) that, although the use of pituitary adrenocorticotropic hormone and cortisone in human patients may result in dramatic remissions of these diseases, such use may also be attended with serious complications.

Their studies provide further evidence along these lines. In their investigations ACTH was administered to 8 patients with the following diseases: acute rheumatoid arthritis, disseminated lupus erythematosus, dermatomyositis, status asthmaticus and acute rheumatic fever. In all except the 2 patients with acute rheumatic fever, the signs and symptoms showed an abrupt remission of the disease following the initial course of treatment with the drug. Metabolic studies during the initial courses of adrenocortical therapy indicate stimulation of the adrenal cortex.

Four patients were treated for prolonged periods. One patient with lupus and one with dermatomyositis, both apparently moribund before therapy, have maintained remission of symptoms after cessation of treatment with the drug. One patient with desseminated lupus or generalized collagen disease became refractory to the drug and died. One patient with acute rheumatoid arthritis tended to obtain lessening degrees of relief from increasing doses of the adrenocortical preparation, which had to be withdrawn because of the appearance of signs of Cushing's syndrome. The development of these complications of refractoriness to the drug, or Cushing's syndrome, of potassium deficiency and of encephalopathy, suggests that the therapeutic use of pituitary adrenocorticotropic hormone must be approached with great caution.

Bacitracin in Aerosol Form

The value of the antibiotic, bacitracin, in aerosol form is noted by S. J. Prigal and M. L. Furman (*Am. Allergy* 7:662, 1949). They report that preliminary observations with bacitracin indicate that it may be safely and effectively employed in aerosol form for the treatment of sino-respiratory disease. Although a true evaluation of bacitracin aerosol cannot be made at this time, in combination with penicillin it has been very effective and suggests synergistic action of these antibiotics. Bacitracin is especially indicated: (a) when the cultured organism is sensitive to bacitracin but not to penicillin, as was shown



8 Reasons Why PLYMOUTH

ZINC STEARATE U. S. P.
IS BEST FOR DRUGS AND COSMETICS

1 Backed by the longest commercial Stearate manufacturing experience in America . . M. W Parsons offer you this new product as the finest Zinc Stearate that can be made.

2 Years of research have made possible a particularly white product

3. Special production methods . . developed over more than a quarter of a century . have made it ODORLESS

4 It will not develop offensive odors even if kept for a long period

5. It enables your face powder to retain the same odor that you give it.

6. A smooth, light, fluffy texture has been finally and definitely achieved.

7 Tested independently it shows the following results: ARSENIC (Gutzeit and Spectrographic Test) . . Not Found. LEAD (Spectrographic Determination) . . . 1.7 parts per million.

8. The reputation and record of M. W. Parsons assure you of Uniformity in all shipments.

We also manufacture a superlative grade of PLYMOUTH MAGNESIUM STEARATE

M. W. PARSONS

Imports

59 BEEKMAN STREET
NEW YORK, N. Y., U S. A and PLYMOUTH ORGANIC LABORATORIES, Inc.

Telephone BEEKMAN 3-3162—3163—3164
Cable Address. PARSONOILS, NEW YORK

GERARD J. DANCO, INC.

5 EAST 19th STREET • NEW YORK 3, N. Y.

Telephone: ORegon 3-6790 Cable Address: CODAN, N. Y.

ORIGINATORS OF
NEW PERFUME TONES

Laboratories in New York, N. Y. and Grasse, France

FINE ESSENTIAL AND FLORAL OILS

AROMATIC CHEMICALS

MUSK • CIVET • AMBERGRIS

CODAN

Sales Offices in New York, N. Y.—Montreal, Canada—Paris, France

in nine of ninety instances in our series; (b) in penicillin hypersensitivity or intolerance; (c) in mixed infections in which the neutralizing action of penicillinase may be a factor. No absorption of bacitracin from the respiratory system could be demonstrated in their studies.

Podophyllin in Scalp Ringworm Therapy

The possibility that podophyllin may be useful in the treatment of ringworm of the scalp is indicated in the report by F. Reiss (*Exper. Med. & Surg.* 7:229, 1949). He states that on the basis of cultural and microscopic evidence of changes produced in fungi by podophyllin *in vitro*, ten children with tinea capitis were treated with 1 per cent podophyllin in a "Carbowax" base. In all, tinea capitis was confirmed by demonstration of fluorescence under Wood's light. Cultures of specimens from the scalp were positive for *M. audouini* and *M. lanosum* (one case). Ages of the children ranged between three and 13 years. The fluorescent area was reduced by the treatment to one-third its original size in seven cases and to complete disappearance, except for four hairs in one case, within one week. In two cases two weeks were required for the area to become completely cleared. One of these patients, who had the *M. lanosum* infection, had received previous treatment with other fungicidal remedies for two months without effect. There was no relapse demonstrable in three weeks, either by Wood's light or microscopically. At times a temporary local inflammation was produced by the Carbowax, and was believed to be beneficial.

Methionine for Diaper Rash

The data presented by R. S. Goldstein (*Arch. Pediatrics* 66:553, 1949) is an extension of previously reported studies in which methionine was employed for the treatment of napkin dermatitis (known also as diaper rash and ammonia dermatitis) affecting infants and young children.

It has been noted that administration of thiamine (60 mg. daily in the infant's formula) was effective in clearing the urine of ammonia and in bringing about improvement in the dermatitis. Inasmuch as this effect could not be explained in terms of thiamine's known vitamin activity, other substances (without vitamin activity) were tried in an effort to elucidate the mechanism of this action. Methionine was selected for trial because its structural configuration bears certain resemblances to that of thiamine; both contain sulfur, methyl and amino groups. Results were equivalent to those obtained with thiamine.

More than 500 infants with napkin dermatitis have been treated with methionine, granulated (10 per cent dl-methionine plus 90 per cent dextrose and lactose). Therapy was successful in all but three cases. The excess ammonia consistently disappeared from the urine in three to four days. Napkin dermatitis and ulcerations cleared up in seven to ten days. In the three cases which could not be treated with methionine, thiamine was substituted and good therapeutic results were obtained.

Tetraethylammonium Chloride for Chest Pains

The intravenous administration of tetraethylammonium chloride to a patient acutely ill with thrombophlebitis and pulmonary infarction unexpectedly relieved the patient's severe pleuritic pain. As a result of this observation, the effect of tetraethylammonium administration has been studied by H. L. Israel and his colleagues (*New England J. Med.* 241:738, 1949) in other patients with chest pain. In all cases a diminution of pain was noted. In some patients the effect was slight, being manifested chiefly by ability to breathe more deeply; in others the relief was considerable although brief in duration, but in the majority relief was marked and prolonged.

In summarizing the findings, it is stated that tetraethylammonium chloride administered intravenously in relatively small dosage has been observed to relieve chest pain due to a variety of conditions, including pulmonary embolism, trauma, pneumonia, pleuritis, tuberculosis, neoplasm, mediastinal emphysema and myocardial infarction. Relief was notably complete and prolonged in patients with pain due to infarction and trauma. These results appear to justify a further trial of tetraethylammonium chloride for the treatment of severe chest pain.

Trichlorethylene Analgesia for Children

J. Thomas, D. A. I. Grewar and J. G. Grounds (*Brit. Med. J.* 2:1449, 1949) have pointed out that analgesia which is safe, easily induced and controlled, and devoid of untoward after-effects would appear to be desirable in many of the painful or frightening diagnostic and minor therapeutic procedures in medical pediatric practice. Local analgesia produced by procaine or similar substances is safe, but causes initial pain and thereafter apprehension and resistance. Drugs such as chloral hydrate and the barbiturates have not sufficient analgesic effects.

They note, however, the trichlorethylene ("Trilene") is one of the safest analgesic agents From observations on 60 young patients it is evident that the agent is well taken and well tolerated by children. When administered from an inhaler of the Blease type it produces satisfactory analgesia (98 per cent in their series). It allowed a variety of procedures to be carried out without pain or resistance, or the inconvenience and risk of general anaesthesia. Psychological upsets are greatly diminished, thus allowing frequent investigations of a disturbing nature to be carried out. Apart from occasional post-analgesic vomiting (2 per cent) Trilene produced no undesirable after-effects. Trilene given with an inhaler of the Blease type secures analgesia more effectively and with a greater margin of safety than any other method with which we are familiar.

Ephedrine-Penicillin Therapy for Respiratory Conditions

The effectiveness of ephedrine-penicillin combinations for the treatment of various respiratory conditions is indicated in the report of S. J. Weinberg and G. L. Packer (*Arch. Int. Med.* 84:389, 1949). They treated half of a group of 28 male patients who had chronic bronchial infection, chiefly bronchiectasis, emphysema and intrinsic asthma, with an aerosol ephedrine-penicillin solution; the remaining 14 received a micronized ephedrine-penicillin mixture. The patients treated for three weeks with nebulized (aerosol) ephedrine sulfate U. S. P. followed by aerosol of penicillin calcium gained considerable benefit, as indicated by reduced sputum, increased exercise tolerance, reduced dyspnea, cough and chest discomfort, improved sleep and appetite and decreased epinephrine requirement. The patients treated for an equal period with micronized (dust) ephedrine sulfate U. S. P. followed by micronized penicillin calcium derived apparently equal benefit, with an additional increase in vital capacity. Minor reactions, such as oral dryness, saccharine taste and nausea, appeared in this group. Allergic manifestations seldom accompanied the therapy. Bacteriologic studies indicated approximately equal effectiveness of treatment with moist and dry preparations.

NOW!

improved STEARIC ACID

Now, by combining modern scientific techniques with "know-how" that dates back to 1837, A. Gross & Company offer a HEAT-STABLE Stearic Acid with a reduced odor level and increased resistance to deterioration.

This new odor-reduced "Special Improved Stearic Acid" is of importance to manufacturers of fine cosmetics, food emulsifiers, soaps, stearates and other products demanding the highest fatty acid content possible.

A. Gross' Stearic Acids follow the natural balance of Palmitic Acid and Stearic Acid as found in tallow. The importance of the Palmitic Acid content (55%) of natural Stearic Acid, whether for the production of quality face creams or durable buffing compounds, cannot be discounted.

For consumers who desire a higher percentage of Stearic Acid for less demanding applications, we have available a white Hydrogenated Tallow Fatty Acid with a Stearic Acid content of 70%.

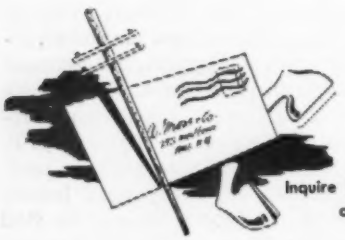
MANUFACTURERS SINCE 1837

SPECIFICATIONS

	TRIPLE PRESSED	DOUBLE PRESSED
Titre °C	54.5°- 55.0°	53.9°- 54.3°
Titre °F	130.1°-131.0°	129.0°-129.7°
Color 5¼" Lovibond Red	0.1 - 0.5	0.5 - 1.0
Color 5¼" Lovibond Yellow	1.0 - 2.0	2.0 - 3.0
Saponification Value	207 - 210	207 - 210
Acid Value	206 - 209	206 - 209
Iodine Value	3.5 - 4.5	5.5 - 7.0

ADVANTAGES

- √ Heat tested for resistance to discoloration and oxidation.
- √ Lowest unsaponifiable content.
- √ Highest Fatty Acid content.
- √ Reduced odor level.
- √ Greater stability in esterification and saponification.



Inquire Direct or through our agents.

A. GROSS & Company

295 MADISON AVE., NEW YORK 17, N. Y.
FACTORY: NEWARK, N. J.

George Mann & Co., Inc.
Providence 3, R. I.

Baker & Gaffney
Philadelphia 7, Pa.

Braun-Knecht-Heimann Co.
San Francisco 19, Calif.

J. C. Ackerman Company
Pittsburgh, Pa.

James O. Meyers & Sons
Buffalo, N. Y.

Braun Corp.
Los Angeles 21, Calif.

Thompson Hayward Chemical Co.
Kansas City 8, Mo. (And Branches)

Moreland Chemical Co.
Spartanburg, S. C.

Smead & Small, Inc.
Cleveland 15, O.

Charles Albert Smith, Ltd.
Toronto 3, Canada

J. W. Stark Co.
Detroit 2, Mich.

READERS' QUESTIONS

CHLOROPHYLL DENTIFRICE: I am interested in formulating an ammoniated tooth powder with a water-soluble purified type of chlorophyll. My problem is how much chlorophyll to use for producing effective results, how to incorporate the agent, and if any incompatibilities are to be encountered. Chicago.

Frankly, I do not know the proportion of chlorophyll to be incorporated in a tooth powder, nor do I think you can legally use it in this manner. It is my impression that the dentifrice use of chlorophyll is covered by the Gruskin patent (U. S. 2,120,667). I would suggest that you obtain a copy of this patent and check its claims. The patent can be obtained by writing to the Commissioner of Patents in Washington; enclosing twenty-five cents.

LICE PREPARATIONS: We are very much interested in adding to our line a preparation for pubic and head lice which employes the latest and most effective material. We would appreciate a formula for both a powder and a liquid. Detroit.

A very highly recommended liquid preparation known as NBIN for treating head lice is as follows:

DDT	1 per cent
Benzocaine	2 " "
Benzyl benzoate	10 " "
Polyoxyethylene Sorbitan Monooleate (Tween 80)	2 " "
Water, to make	100 " "

A coating of the emulsion is applied thoroughly to the hair or scalp with a brush and followed by a shampoo with soap and water the next day. If infestation is severe and there is considerable pyococcic infection, it is advisable to repeat the treatment two or three times on successive or alternate days. Fine combing is not necessary. A powdered preparation may consist of DDT applied in 10 per cent concentration in talc. This is left on overnight and then removed by a shampoo the following day.

For pubic lice, NBIN is also very satisfactory. While one application is usually adequate, it is generally considered advisable to make applications on two or three successive days. Dusting of 10 per cent DDT in talc is also effective in treating pubic lice.

CUTICLE "REMOVER": Can you give me a formula for a cuticle remover, something that is not just a simple solution of sodium hydroxide in water? Toledo.

I think that something made along the following lines will perhaps satisfy your demand:

Triethanolamine	25.0
Glycerine	25.0
Potassium carbonate	5.0
Water	95.0

OPACIFYING A LIQUID SHAMPOO: I have been trying to give a creamy appearance to a clear shampoo without the use of special emulsifiers or special treatments. Can you suggest any material that will create the desired effect? Brooklyn.

I would suggest that, in order to obtain opacity or a cream effect, you try adding a small proportion of cetyl alcohol or stearyl alcohol to your liquid shampoo. You may be required to use a little heat to get these materials into solution.

PERMANENT WAVE PREPARATIONS: We manufacture a line of beauty parlor supplies. Now we are in need of a permanent wave solution which will permit us to add a suitable oil if we so wish, so that the oil will not separate. At the same time, we are interested in a formula for making a permanent wave cream. Can you oblige? Tampico.

I think your first problem can be readily solved through the use of a preparation such as the following:

Monoethanolamine	6.0 per cent
Potassium sulfite	1.5 " "
Potassium carbonate	1.5 " "
Borax	0.5 " "
Ammonium carbonate	2.5 " "
Sulfonated castor oil	1.0 " "
Water distilled	87.0 " "

With regard to a permanent waving cream, I suggest:

Ammonia (28%)	8.0 per cent
Ammonium carbonate	5.0 " "
Potassium carbonate	3.0 " "
Sodium sulphite	4.5 " "
Sodium hydroxide	4.0 " "
Water	55.5 " "
Oxycholestrol absorption base	20.0 " "

STAIN REMOVING CREAM: We would be interested in a formula for preparing a cleansing cream which would remove hectograph ink from the hands. If possible, it should also remove ball pen ink. Detroit.

I think you will find the answer in the following formula for a carbon paper and ink removing cream:

"Carbowax" compound 4000	19.1
Propylene glycol	19.1
Triethanolamine	3.0
Oleic acid	5.3
Lanolin	2.7
Water	19.1
Terpineol	0.2
Abrasive (Multi Cell 000)	31.4
Sodium bisulfite	0.1

PERFUMER'S SHELF

Higher Fatty Aldehydes

The higher fatty aldehydes, says T. Ruemele in the *Manufacturing Chemist and Manufacturing Perfumer* (20:291, 1949), are extremely valuable perfume materials, but they present special problems of fixation, although best effects are obtained only with substances of the highest purity, it is difficult to use the pure aldehydes because of their tendency to oxidize or polymerize. To prevent such reactions it is necessary to dilute the aldehydes with alcohols.

In discussing individual compounds, Ruemele notes that octyl aldehyde also known as caprylic aldehyde, has a fresh, sharp, spicy odor reminiscent of oranges and lemons. At the same time it has a waxy note. It has been suggested for use in traces in fancy bouquets such as eau de cologne compositions, as well as in carnation, jasmin, rose and handkerchief perfumes. This aldehyde effectively underlines and modifies a composition and it creates a stricking, almost inimitable note. To fix octyl aldehyde, methyl nonyl ketone and oil of rue with its traces of methyl anthranilate should be considered. Since these fixatives have an odor resembling the aldehyde itself, they should be used only in traces.

Nonyl aldehyde, also known as pelargonic aldehyde has, besides its waxy note, a very refreshing floral odor. It can be used to great advantage in rose compositions, to which it gives a natural freshness and softness. When used in rose perfumes, nonyl aldehyde may be fixed with geranium oils. storax, cinnamic alcohol or phenyl acetaldehyde methyl acetal. If the aldehyde is used in a neroli blend, methyl naphthyl ketone, cananga oil or terpeneless petitgrain oil are suitable fixatives.

Methyl hexyl acetaldehyde deepens the note of floral perfumes with its fragrance of melon bark and unripe nuts. Suitable fixatives for this compound include dimethyl benzyl carbinol, phenyl acetaldehyde dimethyl acetal, amyl cinnamic aldehyde, phenyl propyl alcohol and cinnamic aldehyde.

Decylic aldehyde, called also capric aldehyde, is a constituent of synthetic neroli and of sweet and terpeneless orange oil. Its typically fresh and sweet odor can be used effectively in eau de cologne compositions and the desired fragrance can be satisfactorily rounded off with the methyl esters of cinnamic and methyl anthranilic acid, methyl naphthyl ketone, nerolin, and terpeneless petitgrain oil. The aldehyde can also be used to advantage in florals such as carnation, violet, wallflower and rose. Fixation, when it is thus used, is most effectively accomplished by employing such substances as geranium oil, phenyl ethyl propionate, methyl ester of cinnamic acid, cinnamic alcohol, methyl ester of methyl anthranilic acid, α-amyl cinnamic aldehyde, benzyl salicylate, benzyl cinnamate, cananga oil and anisic alcohol.

Undecylic aldehyde resembles otto of rose and is very widely used, its fresh, unique odor providing interesting compounding possibilities. It should be noted that there is a saturated and unsaturated form of this substance. The saturated aldehyde considerably enhances the olfactory effect and accordingly it is used more than the former, or, for that matter more than any other aldehyde. Suitable fixatives include β-isomethyl ionone, vetiverol, vitiveryl acetate, patchouli oil, etc.

Dodecylic aldehyde or Laurinic aldehyde, is the other name for this substance which has a sweet odor with a penetrating fatty note. When diluted it gives a scent resembling that of violet leaves. Dodecylic aldehyde is particularly suitable for fancy compositions giving freshness to such perfumes as tuberose, jasmin, mimosa and lily of the valley. It also imparts an interesting finish to gardenia and hyacinth perfumes. Benzoin, tolu balsam, cinnamic alcohol, anisic alcohol, benzyl isoeugenol and benzyl cinnamate are the substances necessary for rounding off such compositions.

When methyl monyl acetaldehyde is diluted. says Reumele, its sweet scent recalls oranges and ambergris. It is particularly useful to freshen resinous notes and to aid in finishing floral compositions, like mimosa. It requires only slight fixation; the most suitable substances for this purpose include ionone, methyl ionone, vanillin and benzoin.

New Constituents of Essence of Aspic

In a report in *Industrie de la Perfumerie* (through *Perf. & Essent. Oil Rec.* 40:421, 1949), Girard has indicated the presence of three new constituents in the essence of aspic (*Lavendula spica* D. C.). These are: n-hexandol-1 (0.03-0.04 per cent), coumarin (0.5 per cent), and formic acid (0.01-0.02 per cent); all three being in the free state. It is noted that the only constituents definitely established previously are: *d*-camphor, *d*-borneol, eineol, and *l*-linolol. The analytical characteristics of the essence under investigation were as follows:

Specific gravity at 15° C.	**0.9174**
Specific rotation	**—2° 15′**
Refractive index at 20° C.	**1.4704**
Acid value	**2.24**
Ester value	**12.6**
Ester value after formylation (cold)	**157.1**
Ester content (as linalyl acetate)	**4.4%**
Free alcohol content of mol. wt. 154	**43.2%**
Total alcohol content of mol. wt. 154	**46.8%**
Carbonyl index, cold	**6.4**
Carbonyl index, warm	**37.8**

Perfume Materials from Orange Leaves

Odorous products from sweet orange leaves have been obtained by O. R. Gottlieb (*Ind. parfum.* 4:9, 1949). Steam distillation of sweet orange leaves (*Citrus aurantium*) from Brazil gave 0.1 per cent of a volatile oil with the following characteristics:

Specific gravity	**0.8962**
Index of refraction	**1.4911**
Specific rotation	**11.2°**

Cold extraction with benzene gave 1.1 per cent of a green waxy concrete from which steam distillation gave 10.9 per cent of a volatile oil of a more delicate odor than the first. This second oil had the following physical properties:

Specific gravity	**0.8758**
Index of refraction	**1.4822**
Specific rotation	**10.2°**

The volatile oil contained 15.8 per cent aldehydes (by oxidation), 8.1 per

cent primary and secondary alcohols (by acetylation in pyridine), 14.5 per cent tertiary alcohols (by cold formylation), and 9.4 per cent esters.

Farnesal

According to R. W. Moncrieff (*Soap, Perf. & Cosmetics* 22:1006, 1949) farnesal is a material of considerable potential importance in perfumery. Farnesal, a sesquiterpene aldehyde, has the systematic name 3, 7, 11-trimethyl-2, 6, 10-dodecatrien-1-al. The parent alcohol from which it is usually obtained, farnesol, was first isolated from oil of ambrette seeds, *Abelmoschus moschatus*, and has since been identified in many other oils. On oxidation with chromic acid farnesol yields farnesal. Because farnesol has been the most widely used starting material for the preparation of farnesal it is pertinent to note its sources. It is found in ambrette seed oil, in acacia blossom oil and in balsam of Tolu. It has also been found in rose, orange, lilac, reseda and lime.

Farnesol bears the same relation to nerolidol as geraniol does to linalool. Because nerolidol can be converted to farnesol by various means it is of interest to consider the sources of this material. In nature it is a constituent of orange blossom oil and of Peru balsam.

Ruzicka showed that it could be synthesized by condensing geranyl chloride with acetoacetic ester and treating the resulting ketone, which is geranylacetone or dihydropseudoionone, with acetylene and sodamide to produce dehydro-*dl*-nerolidol which is then reduced to *dl*-nerolidol.

When nerolidol is treated with acetic anhydride, a molecular rearrangement occurs and it is converted into the acetate of farnesol.

In 1947 an important new source of *d*-nerolidol was discovered by Naves. He found that nerolidol constituted 80 per cent of the oil from the wood of *Myrocarpus fastigiatus* and *Myrocarpus frondosus* which grow in Brazil and are closely related to *Myroxylon Pereirae* which yields Balsam of Peru. The oil from the two former trees is known as oil of cabreuva; it is a colorless liquid with a mild but persistent odor of roses and sandalwood. Naves apparently was the first to appreciate that it was substantially free from aromatic constituents, and that in fact it consisted mainly of sesquiterpenes. In addition to containing 80 per cent nerolidol, it also yielded 2.5 per cent farnesol.

In discussing the conversion of farnesol to farnesal, Moncrieff notes that, in 1941, Karrer and Epprecht developed a procedure by which they were able to make this conversion. Following a consideration of this method, attention is focussed on methods for converting nerolidol to farnesol. On such, a patented process, consists of heating the nerolidol with acetic anhydride for 20 hours at 120-140° C., removing excess acetic acid, saponifying with alcoholic potash, heating with phthalic anhydride to obtain a phthalic ester and purifying and saponifying the latter. On oxidation of farnesol, or on treatment of nerolidol with chromium trioxide, farnesal is obtained.

Moncrieff points out that a recently described synthesis of farnesal takes advantage of the new sources of nerolidol that are now available. He feels that the way to large and economical production of farnesal now seems to be clear. Nerolidol may be obtained in quantity and cheaply from the wood oil of cabreuva trees, and by treatment with a chromic acid mixture under suitable conditions it yields 36 per cent of very pure farnesal. There can be little doubt that this yield could be improved by working up the rejected fractions as would certainly be done on an industrial scale.

Oil of Origanum Virens

A. F. Costa and J. C. do Vale (*Noticias Pharm.* 14:375, 1948 through *Chem. Abstr.* 43:9383, 1949) have reported that the essential oil of *Origanum vireus* had the following physical characteristics:

Specific gravity	**0.8945**
Specific rotation	**–18.1°**
Index of refraction	**1.4849**
Acid number	**8.6**
Ester number	**9**
Ester number after acetylation	**125**

Alcohols comprised 34 per cent by acetylation, of the oil and 40 per cent, by formulation. Phenols totaled 5 per cent; 1.6 per cent comprising thymol, the rest carvacrol. Also present in the oil was 35 per cent of cineole and 4 per cent of camphor. Pinene and dipentene were also found. The oil is said to be quite similar to that obtained from *Origanum vulgare*.

Rare Oils from Morocco

In their study of the flora of Morocco, J. Gattefosse and G. Igolen (*Ind. parfum.* 4:110, 1949) have reported on the characteristics of a number of rare or unknown essential oils. For example, several varieties of *Mentha rotundifolia* have been found; the oil of the variety *typica* having the following characteristics:

Specific gravity	**0.9782**
Specific rotation	**+68°30′**
Index of refraction	**1.4897**
Acid index	**1.12**
Ester index	**36.47**
Ester index after acetylation	**206.20**
Carbonyl index, hot	**27**

The oil is soluble in 0.1 volume of alcohol at 90° C., without cloudiness.

It is reported that the oil obtained from *Mentha longifolia* has a rather disagreeable herbacious odor and gives the following assay:

Specific gravity	**0.965**
Specific rotation	**+39°4′**
Index of refraction	**1.4919**
Ester index, after acetylation	**123.45**

The oil is soluble in 0.4 volume of alcohol at 85° C.

The oil obtained in about one per cent yield from *Pulicaria mauritanica* has an agreeable fruity odor, reminiscent of hyssop and wormwood. A typical assay shows the following properties:

Specific gravity	**0.938**
Specific rotation	**45°**
Index of refraction	**1.4800**
Acid index	**2.2**
Ester index	**23.9**
Ester index after formylation	**36.5**
Carbonyl index, cold	**70.5**
Carbonyl index, hot	**313.3**

Information is also given on the oil of *Mentha rotundifolia*. It has a pennyroyal-like odor and the following physical characteristics:

Specific gravity	**0.9396**
Specific rotation	**+17° 10′**
Index of refraction	**1.4864**

It is soluble in six volumes of alcohol at 60° C. and has a pulegone content of 97.2 per cent.

Data with respect to other oils studied by Gattefosse and Igolen are summarized in the following table:

	Satureja peltieri	*Genevrier oxycedre*	*Ammi visnaga*	*Glycyrrhiza foetida*	*Salvia maurorum*	*Camomille marocaine*
Specific gravity	0.947	0.9476	0.9103	0.8492	0.9208	0.9373
Specific rotation	— 10° 12′	—21° 4′	+5° 30′	— 8°	—27°2′	—
Index of refraction	1.4841	1.5145	1.4696	1.4793	1.4759	1.4839
Solubility in alcohol	0.8 volume (80°)		1 volume (80°)			2.80
Acid index	9.24		1.96	2.24	1.5	68 04
Ester index	50.40		67.33	12.6	7	210.42
Ester index after acetylation	115			14		
Carbonyl Index, cold	64.40		26	5.6		
Carbonyl Index, hot				9.8		+80

THE SWING
to
PANTHENOL
Vitamin A
U.S.P. units
mg.
mg.
mg.
Panthenol* 25 mg.
mg.
Vitamin C
U.S.P. units
Vitamin D
mg.
Vitamin E Acetate
*Equivalent to 25 mg. Calcium Pantothenate.
Label statements on more and more packages are showing panthenol 'Roche' in use as a replacement for the salts of pantothenic acid. Now pharmaceutical manufacturers, who are always alert for new, helpful developments, are using panthenol in multi-vitamin tablets, capsules, ampuls, and elixirs. And with good reason, because 'Roche' panthenol has definite advantages (see below):

PANTHENOL *is more stable ∴ costs less*

WHY YOU SHOULD USE IT

1. **HIGH STABILITY** which means greater economy, biological activity on a molecular basis equal to pantothenic acid or its salts, high resistance to heat sterilization, and no precipitation of insoluble calcium salts from solutions. Greatly improved stability over pantothenates in liquids of pH 3.0—4.2.
2. **SOLUBLE** not only in water but ethanol, methanol and isopropanol.
3. **FEWER INCOMPATIBILITIES.**
4. **MORE LATITUDE** in compounding.
5. **REDUCED HYPERTONICITY** in parenterals.

Get all the facts now about panthenol 'Roche'. Write to the Vitamin Division. And look to 'Roche' first for leadership in vitamin research.

PROPERTIES

A colorless, odorless, viscous, slightly hygroscopic liquid. Stable in light and air. Very soluble in water and most common solvents. Slightly soluble in ether. Hydrolysed by alkali and strong acid.

All panthenol 'Roche' is packed in seamless aluminum bottles.

VITAMINS 'ROCHE'

Ascorbic Acid • Thiamine Hydrochloride • Panthenol • Riboflavin
Pyridoxine Hydrochloride
Biotin • alpha-Tocopherol • Niacin • Niacinamide

VITAMIN DIVISION
HOFFMANN-LA ROCHE INC. • NUTLEY 10, NEW JERSEY
In Canada: Hoffmann-La Roche, Ltd., Montreal, Que.

ABREAST OF THE MARKETS

FIRMER TONE DEVELOPS IN ESSENTIAL OILS, BOTANICALS IDLE; QUICKSILVER UP $1.00, NEVADA MINE SHUTS DOWN

Essential oils were the most active feature of the market during February, with increasing firmness exhibited in certain groups of oils, depending on their origin. The future availability of Chinese oils became all the more enigmatic with the signing of the Russo-Communist China treaty, since the full text of the agreement was apparently not made known. Spokesmen in the essential-oil trade indicate an unwillingness to predict future trade developments, and simultaneously suggest that one of two possibilities might occur—either Russia will leave Communist China to her own economic devices or will gradually step in and establish complete control over Far Eastern exports, assigning whatever prices she chooses.

In the region of the Reunion Islands and Madagascar, such oils as geranium, ylang ylang, and clove have become quite firm as a result of the recent cyclones which struck the general area. Recent cables from this area state that considerable damage and loss was suffered by crops, including Bourbon vanilla beans. Among the citrus crops, domestic lemon oil prices have been reflecting the severity of California frosts, while the Italian variety has also undergone losses because of cold weather and the additional hardship of a fungus disease.

Very few changes occurred in botanical prices last month, chiefly because importers are postponing large-scale buying and instead are placing their orders in smaller quantities, perhaps awaiting a more stable tone in trade conditions. One botanical house states that its domestic trade today is almost on a par with that of 1946, its peak year. At the same time, its export trade has fallen off somewhat, a development which this spokesman attributed to the hesitation of Latin-American countries in purchasing non-essential materials (like botanicals) in dollar areas, lest they expend their dollar reserves. These countries apparently feel thay should purchase only indispensable items with their dollars.

Similar views on Latin American trade conditions were expressed in the February 17th *Journal of Commerce* by H. W. Balgooyen who stated that overall trade between the United States and the Latin American republics held up well last year, having declined approximately 9 per cent from 1948. In general Mr. Balgooyen says, the U. S. imports were almost as large as those of the previous year, but the exports declined about 13 per cent, "reflecting the adoption of measures by various nations to curtail 'non-essential' imports, as a means of conserving dwindling dollar exchange resources."

Waxes Change Slightly

Suggesting that the price war in montan wax between the Czechoslovakian and German origins is still in progress, the wax decreased 2c during February to the range from 16c to 18c. Other changes in waxes occurred in Carnauba No. 1, which fell 2c and is quoted from $1.11 to $1.13, and candelilla, which advanced 2c and appears in the range from 45c to 47c. The refined wax is 2c higher, priced from 49c to 51c.

The amount of candelilla wax which may be exported from Mexico in 1950 through the associations of producers, sole exporters, will probably be greater than the 2,700 metric tons produced in 1949, according to one report. In respect to carnauba-wax production, the government of Brazil has set a limit of 40,000,000 cruzeiros ($2,000,000) for financing the 1949-50 crop in the state of Ceara.

Quicksilver Increased by $1.00

Quicksilver took an unexpected turn upward at the end of February, as the price advanced one dollar a flask to the level of $76.00, marking the first increase since 1948. This development has been attributed to two major factors—the closing down of the Cordero Quicksilver Mine in Nevada and the increased shipping prices from Spain, recently set at about 5 per cent more. Some quarters indicate that domestic production will continue to dwindle into the second quarter of the year when little metal will be produced. At the present time domestic production of quicksilver is slight, but if the price should continue to increase, it would tend to spur production.

In some quarters a further decline in the price of quicksilver had been expected, rather than an increase, because of the dissolution last month of the Spanish-Italian Cartel, Mercurio Europeo. The opinion had been expressed that Spanish-Italian competition might possibly develop and tend to cause a drop in the metal price. Consternation is still very much present in the trade, since some sources believe the market is quite unstable following the breaking up of the cartel and indicate the price might turn either up or down at a moment's notice.

• Prices quoted in this section were current on the first of this month.

Peppermint Oil Continues Up

Peppermint oil continued its advance last month, the natural material increasing from $6.00 on the inside to $6.25, and the redistilled increasing from $6.50 to $6.75. As mentioned in a previous issue, the current upturn in prices has been attributed to the lower-than-normal menthol content of the oil, to the strong position of the farmers, and to the diminishing stocks on hand.

Plantings in peppermint and spearmint crops during 1949 totaled 62,600 acres with production amounting to 2,110,000 pounds of oil valued at $9,373,000, according to the Bureau of Agricultural Economics, U. S. Department of Agriculture. This compares with 64,100 acres producing 2,369,000 pounds of oil valued at $13,175,000 in the preceding year. However, both years were considerably above the 10-year (1938-47) average of 46,360 acres producing 1,410,000 pounds of oil valued at $6,369,000.

The yield of oil, in 1949, from 44,900 acres planted in peppermint was 1,579,000 pounds, valued at $7,692,000. Pro-

(Continued on page 338)

METAL CONTAINERS *and* CLOSURES
by
BRIDGEPORT

Vanities
Jar Caps
Bottle Caps
Drawn Talc Containers
Powder Boxes
Perfume Vial Cases and Caps
Lip Brushes
Dry and Paste Rouge Cases
Lipstick Containers --- Swivel, Slide, Automatic

and

Other Special Metal Products for the Cosmetic Industry

THE BRIDGEPORT METAL GOODS MFG. CO.
Established in 1909
BRIDGEPORT CONNECTICUT

WANT
AEROSOL BOMBS
FILLED?

G. BARR & COMPANY, dependable name in private label manufacture, has now added the newest and finest equipment to fill your AEROSOL BOMBS. Capacity of more than one million bombs a month insures prompt delivery. Experienced laboratory guarantees control and is always at your service. Requests for information will receive immediate attention.

G. BARR & COMPANY
MANUFACTURING CHEMISTS
1132 WEST 37TH STREET, CHICAGO 9, ILLINOIS
COMPLETE MANUFACTURING AND PACKAGING SERVICE OF ANY FORMULA

LEMON OIL BEGINS ADVANCE, CITRUS CROPS DAMAGED BY FROST; BOURBON VANILLA BEANS DESTROYED BY CYCLONE

With the approach of springtime and the citrus oil season in candy flavoring, and with the current cold weather on the West Coast, California lemon oil advanced 10c during February to be quoted from $2.90 to $3.25. Italian oil increased 10c and now appears in the range from $2.85 to $5.00. The European oil is said to have gone up because the Italian government failed to reduce the 20 per cent export duty to 17½ per cent on the first of January, according to its original intentions. One spokesman in the trade indicated that the increase in the lemon oil figure is to serve the purpose of meeting the expense of the duty.

The lemon crop in the United States, according to the U. S. Department of Agriculture bulletin, *Foreign Crops and Markets*, has been damaged to a certain extent by the frost, the loss since January first of this year having been estimated at 750,000 boxes. While these lemons were not fit for food purposes, some of them probably were salvaged for the oil content; in any event, oil production was undoubtedly curtailed somewhat, through the freezing of immature fruit. The Agriculture bulletin also pointed out that Italy, which provides 80 per cent of the entire European production, yielded an estimated 6.1 million boxes in 1949, a figure 18 per cent below the 1948 crop of 7.4 million boxes. This decrease is attributed to frost damage and also to destruction of acreage by the fungus disease, mal-secco.

Although there has been no change in the price of orange oil as yet, perhaps, by the same token, an increase might be in the offing. In the United States, for example, January freezes in California and Arizona reduced the orange crop almost six million boxes, while a Florida hurricane which struck in the Fall of 1949 reduced the crop in that area also.

Vanilla Bean Crop Reduced

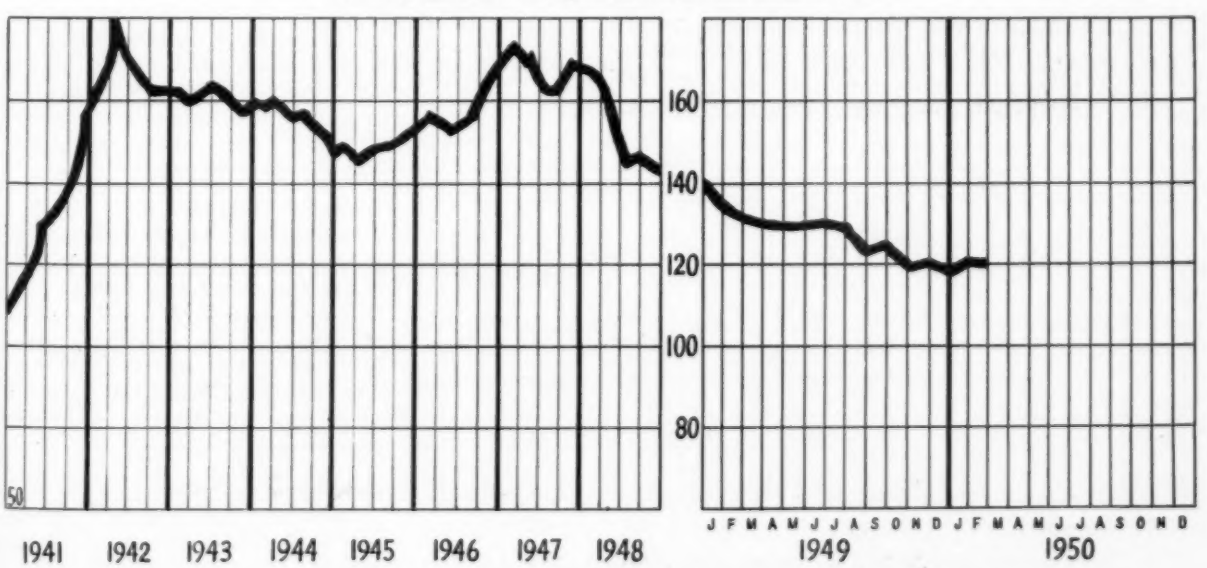
Bourbon vanilla beans went up 25c in February to $4.50, while Mexican cuts jumped another dollar to $6.50 and Mexican whole beans advanced $1.25 to the price of $7.50. Full information has not been received yet relating to the damage wrought vanilla crops by cyclones in Madagascar, however a cable received by a dealer in New York from the American Consul states that considerable losses were incurred by warehouse stocks and by vanilla crops still in the field. It is too early in the year to estimate crop sizes for 1950.

Mexico's 1949 to 1950 crop, however, is estimated at about 100,000 pounds, according to a U. S. Government publication carrying a report of the American Embassy in Mexico City. This figure is less than half that of the 1948 to 1949 production (about 220,000 pounds) and only about one-fifth as large as the 1947 to 1948 crop of 551,000 pounds. The principal causes of this three-year decline were the drought in the producing districts and the low range of prices prevailing last year, in the vicinity of $3.00.

Many growers lost interest in 1949 when the prices hit such a low and a large number of them failed to pollinate their vines in the spring. It is expected, however, that the growers will pollinate all of their vines this spring, according to the government publication, because of the currently advancing price trend. With favorable weather the 1950 to 1951 crop may show a significant increase over that of last year. Mexico normally ranks after Madagascar as the world's principal supplier of vanilla beans; in fact, nearly two-thirds of the 1,075,560 pounds of beans imported into the United States in 1948 were grown in Mexico. In 1949, however, Mexico supplied only 28 per cent of the total imports.

This source of information reports further that as a result of the action of the United States Food and Drug Administration of rejecting shipments of vanilla beans treated with bichloride of mercury the current crop has not been treated with any preservative. Dealers fear, moreover, that untreated beans may develop mold or become infested with insects. The problem is now being studied in cooperation with United States importers and it is hoped that a method of treating the beans may be developed that would insure their

50 Raw Materials—Weighted Price Index. 1926 = 100.



The price index of fifty commodities for February declined minimally from 121.0 to 120.9.

FEBRUARY PRICE CHANGES

UP

Anise oil 10c
Balsam Tolu 10c
Bois de Rose, Brazilian 5c
Candelilla Wax 2c
Celery Oil 75c
Citronella Oil, Ceylon 10c
Citronella Oil, Java 5c
Clove Oil 10c
Geranium Oil, African 75c
Geranium Oil, Bourbon $3.00
Ginger Oil $2.00
Ipecac Root 35c
Lemon Oil, California 10c
Lemon Oil, Italian 10c
Peppermint Oil, Natural 25c
Peppermint Oil, Redis. 25c
Quicksilver $1.00
Sandalwood Oil, Mysore 25c
Vanilla Beans, Bourbon 25c
Mex. Cuts $1.00
Mex. Whole $1.25
Wormseed Oil 25c

DOWN

Agar agar No. 1 50c
Balsam Copaiba Para 10c
Benzoin Gum, Sumatra 5c
Buchu Leaves 8c
Cardamon Oil $5.00
Carnauba Wax No. 1 1c
Golden Seal Root 25c
Menthol, Natural 30c
Montan Wax 2c
Papain, Pure, Powdered 50c

preservation and at the same time meet the requirement of the Food and Drug Administration.

Ipecac Root Increases

Some quarters offered ipecac root at $4.50 during the end of February, but the previous month's price of $4.15 on the inside and $5.00 at the upper end of the range was still being quoted by other sources.

Peppermint Up

(*Continued from page 335*)

ducing states included Indiana, Michigan, Oregon, and Washington. Spearmint produced from 17,700 acres in Indiana and Michigan yielded 531,000 pounds of oil valued at $1,681,000.

Agar Declines

Agar agar No. 1 decreased 50c during the month of February, according to one source which is offering it at $1.50 on the inside and $2.25 at the upper end of the range. Other sources maintained January's figure of $2.00.

Patchouli Remains Firm

Patchouli oil is very firm, the price having remained between $22.00 and $25.00. The tight situation of the oil has been attributed to the general increase in production costs on the island of Sumatra and the Dutch East Indies. One source has indicated that if the leaves themselves were brought to the United States and the oil then distilled from them, the process alone would raise the cost up to $40.00 a pound.

Arnica Flowers Steady

Arnica Flowers remained within last month's range of 75c to 80c, although there are reports as 65c a pound for the material. It has been suggested that the cheaper variety may be spurious, and may originate in Mexico.

Menthol Still in Doubt

Menthol was reduced 30c, according to one dealer, to the inside price of $10.20, while other sources indicate a low of $10.30, extending to $10.50. Menthol shipments have been arriving steadily from the Chinese port of Tientsin, though in small shipments, and often three weeks or more late. No offerings have been made as yet from Brazil, and so the menthol situation still remains in the balance, entirely dependent on future developments in China.

Balsam Tolu Up

Several dealers continued to report increased prices in balsam tolu during the month, the current quotation extending from $2.40 to $3.00, or an advance of 10c over the previous month. This change has resulted from smaller spot supplies and the developing firmness of prices at the origin.

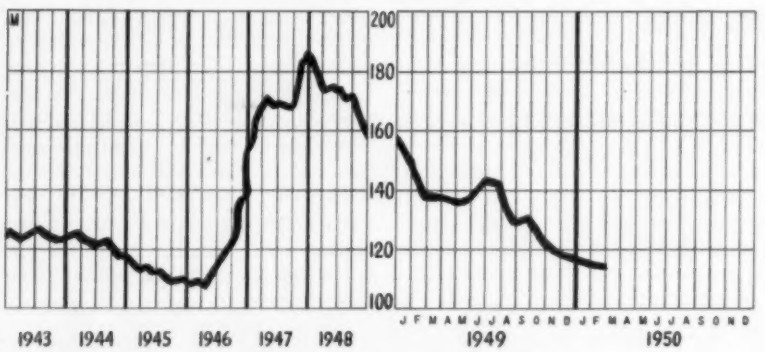
Anise Oil Unsteady

Although some sources reported an increase of 10c in anise oil during February, making the inside price $1.45, and the outside figure $1.55, others reported no change from the previous month's low figure of $1.35. The possibility still exists that this oil may eventually be priced out of the market, should the price continue to advance.

Essential Oils, France

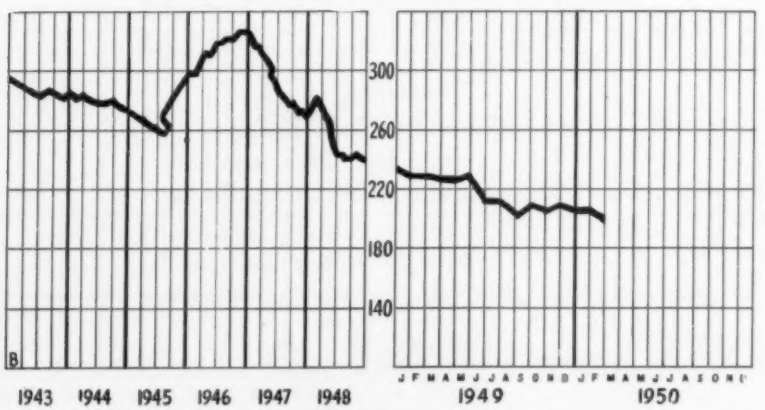
The 1949 drought resulted in serious cuts in production in the essential oil industry of the Lyon District of France. In recent months demand has declined,

15 Medicinal Chemicals—Weighted Price Index. 1926 = 100.



The medicinal chemicals index declined slightly from 116.7 to 116.3. Menthol went down from $10.50 to $10.20.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index declined from 205.8 to 198.9. Agar and buchu were lower; balsam tolu and ipecac root, higher.

and the industry is facing a crisis. Five factories in this district are said to account for 80 per cent of the essentials produced outside of the Grasse area.

This sector of the French essential-oil industry has been unable to regain its prewar markets in Spain, Argentina, and Brazil because of import restrictions in these countries. The possibilities of new outlets in the Middle East are being explored.

Cyclones Damage Bourbon Crops

The upper range of geranium oil reached $20.00 in February, as was anticipated the previous month, owing to the cyclones which struck in the vicinity of the Reunion Islands. A sizable portion of geranium stocks were destroyed, this perhaps accounting for the $3 increase during February to $18.50 for the lower side of the range. Some essential oil houses report that vertivert oil is not available, while others express belief that the situation will become very firm as soon as spot supplies dwindle.

Clove oil advanced 10c in February and is now quoted from $1.70 to $2.00, which may be an indication of losses incurred when the storm hit Madagascar. Ylang ylang is becoming firmer, although no price change has resulted up to the present time.

Camphor Expected to Advance

The invasion threat of Formosa by the Chinese Communists is a strong indication that the island's export activities will become more thwarted as time goes on. The fact that the spot market has already strengthened, probably as a result of the political situation, suggests that higher prices may be forthcoming, as expected in the trade.

Molasses Dilemma

Molasses producers in Cuba were reported facing a serious situation last month in regard to the storing of the commodity, mainly because demand for molasses by American buyers was very low. The chief problem arose from the fact that the Cuban producers had to get rid of the molasses by-product, either by trucking and dumping it at their own expense, or by selling it, even if at a minimal price. Since United States imports remain low at the present time, Cuba is faced with glutted storage facilities. By March 15, for example, it was reported that approximately 125,000,000 gallons were produced from the new crop, which added to the 50,000,000 gallons of molasses carried over from the previous year, would produce a total of 200,000,000 gallons. This is just about equal to the total storage space available.

Sale of alcohol was said to be off early this year due to the unseasonably warm weather and lack of demand for antifreeze solutions.

The Alcohol Tax Unit, Bureau of Internal Revenue, Treasury Department, on March 3 released data on the supply, production, withdrawals, and stocks of ethyl, completely denatured and specially denatured alcohol during the month of January, 1950, in comparison with January, 1949:—

Production

	Proof gallons 1949	1948
Ethyl	25,368,140	26,567,028
*Completely denatured	233,436	148,253
*Specially denatured	14,669,876	12,707,053

Withdrawals

	Wine gallons 1949	1948
†Ethyl, tax paid	2,749,729	2,943,101
tax-free	27,721,460	23,987,693
*Completely denatured	375,283	169,286
*Specially denatured	14,959,295	12,759,640

Stocks

	Gallons 1949	1948
†Ethyl	31,345,990	37,153,853
*Completely denatured	435,647	157,710
*Specially denatured	3,028,755	2,035,504

*Wine gallons. † Proof gallons.

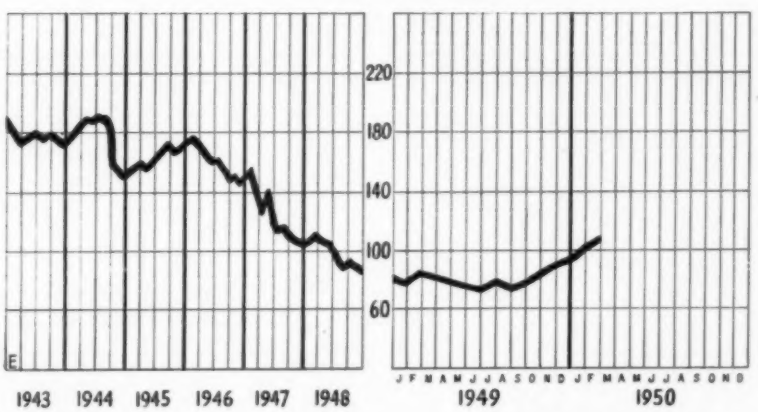
Rose Oil May Be Curtailed

With the recent break in diplomatic relations between the United States and Bulgaria, it is possible that the supply of Bulgarian Rose oil to this country may be curtailed partially or completely. It is felt that a small quantity of oil may be exported through Russian channels, and that direct exportation from Bulgaria will be halted.

Acetylsalicylic Acid Advances

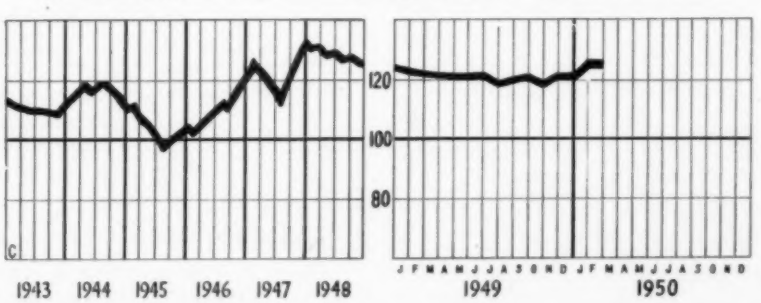
Acetylsalicylic Acid U.S.P. XIII powder No. 80 mesh and Sodium Salicylate U.S.P. XIII both advanced 2c in early March. The acid is quoted at 50c a pound for both a 250 lb. drum and a 100 lb. drum, and 53c a pound for a 25 lb. drum. Sodium Salicylate is now selling at 59c a pound in 100 lb. drums and 62c a pound in 25 lb. drums. Acid containing 10 per cent starch white is also quoted at 50c a pound for 250 lb. drums, while that containing 16 per cent starch white is 48c, and that with 20 per cent starch white, 46c.

15 Essential Oils—Weighted Price Index. 1926 = 100.



The essential oils index advanced from 103.3 to 106.2. Bois de rose, citronella, clove, geranium, lemon, peppermint, and sandalwood were higher.

25 Cosmetic Raw Materials—Unweighted Price Index. 1926 = 100.



The cosmetic raw materials index remained at 125.6. Balsam copaiba and menthol were lower; tolu and candellila wax were higher.

Sales versus Research

(Continued from page 319)

be left alone in its major effort which is that of basic investigation.

So far, we have emphasized the degree to which we feel research should be influenced by sales and now what of the influence of research on the affairs of sales? Certainly, the publicity angle should be jointly controlled. It seems logical that the determination of possible sales volume should be a common function of sales, research and management. Sales will shoot too low; research too high; management can arbitrate. There must be some challenge to sales and it can only be made if sales goals are not made unilaterally. Research should hold the entire responsibility for technical censorship of all promotional literature. Sales should consult research on all future promotional plans because research will know the probable future of a given item much more intimately than will sales. There are many phases of sales which certainly should not concern research . . . salesmen, compensation, price ranges, discounts, contracts, stocks, yearly production schedules, all these and many more are sales problems. I believe however that while the final word should be in the hands of sales, all sales potentials should be bilaterally estimated and that all major promotional campaigns should be bilateral in scope.

In summary, therefore, it would seem logical that sales and research should jointly determine sales potential and major promotional campaigns due to the greater insight by research into the future of any given new or old item. It is, after all, newer and better products in a given field that kill the older items and not, generally, altered sales strategy.

The road to the success of a drug and pharmaceutical corporation lies in logically determined cooperative efforts. Research is the road to the future; sales is and will remain a significant wheel. Logic must determine the course.

Aminophylline

(Continued from page 277)

very severe cases. Moreover, since this method has been in use, it has been possible to discontinue other procedures almost entirely.

In comparison with the intravenous technic, the intramuscular administration of aminophylline is little used. The main reason for this discrepancy lies in the fact that intramuscular injections may be painful. However, there are those[21] who feel that the intramuscular route should be used more frequently. Schwartz[22] has suggested that the simultaneous injection of equal parts of a procaine solution causes little discomfort and will bring about an aminophylline effect in 20 to 30 minutes.

Aminophylline may also be administered rectally,

fine perfume bases

Albert Albek, Inc.

3573 HAYDEN AVENUE, CULVER CITY, CALIFORNIA

either in the form of a retention enema or incorporated in a suppository. When introduced into the rectum, the drug is readily absorbed through the mucosa of the lower intestine. In the treatment of bronchial asthma, Mountain[13] has suggested that, when desired, 0.4 to 0.6 Gm. of the drug can be diluted in 20 cc. of water and instilled rectally with favorable results.

Pertinent in this connection are the studies recently reported by Segal and his colleagues.[23] They found that the rectal administration of 0.5 Gm. of aminophylline yields a degree of protection against the dyspnea and bronchospasm (produced by intravenous histamine and methacholine) equal or superior to that produced by the intravenous injection of the same drug. However, there was a 45 to 60 minute delay incident to absorption from the rectal mucosa, whereas the effects of the drug are apparent immediately following intravenous injection.

Aminophylline suppositories are an increasingly popular form of therapy because they not only prolong the effect of the drug, but also permit easy self-administration by the patient. According to Friedlaender[24] aminophylline suppositories may be used to keep the patient symptom-free or reasonably comfortable during the times when asthma is inevitable. Harkavy[25] also noted that symptomatic relief in continuous asthma may be obtained with this form of medication. Indicative, too, is Goodman's[16] suggestion that a suppository at bedtime may prevent a nocturnal paroxysm.

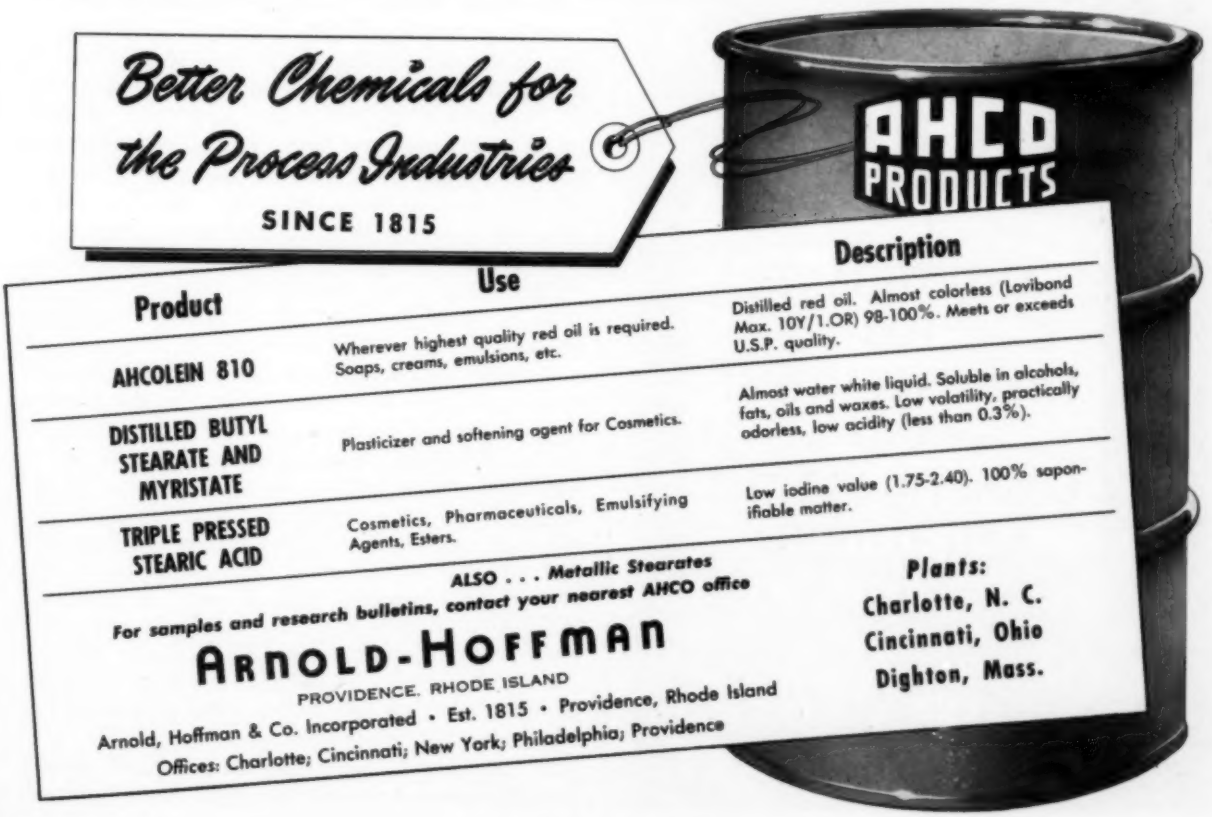
Various suppository bases have been developed for incorporating aminophylline. One manufacturer uses a base of paraffin and cocoa butter. Another is said[26] to employ "a water miscible base consisting of polyoxyalkylene sorbitol monolaurate, polyoxalkylene stearate, and polyethylene glycols." Still another maker produces the drug in a water-soluble "Carbowax" base.[2] Lockey[27] has developed an improved base for suppositories of aminophylline or combinations of aminophylline with ephedrine, a barbiturate or an anesthetic. This consists of:

Liquid petrolatum	**42 parts**
Spermaceti	**45 parts**
White petrolatum	**13 parts**

This base melts easily in the rectum and absorption of the drugs takes place rapidly. It is relatively nonallergic as compared with cocoa butter. A more solid medium can be obtained by increasing the proportion of spermaceti.

On many occasions it is advantageous to administer suppositories containing aminophylline in combination with other drugs. For example, it was found[28] that suppositories containing aminophylline in combination with sodium pentobarbital were more effective during an attack of asthma than were suppositories containing aminophylline alone. The combination provided relief in 93.5 per cent of the cases as compared with 80.8 per cent with the single agent.

To lessen such undesired effects as itching, burning or diarrhea, a local anesthetic, like benzocaine, is


Better Chemicals for the Process Industries
SINCE 1815
AHCO PRODUCTS
Product
Use
Description
AHCOLEIN 810
Wherever highest quality red oil is required. Soaps, creams, emulsions, etc.
Distilled red oil. Almost colorless (Lovibond Max. 10Y/1.0R) 98-100%. Meets or exceeds U.S.P. quality.
DISTILLED BUTYL STEARATE AND MYRISTATE
Plasticizer and softening agent for Cosmetics.
Almost water white liquid. Soluble in alcohols, fats, oils and waxes. Low volatility, practically odorless, low acidity (less than 0.3%).
TRIPLE PRESSED STEARIC ACID
Cosmetics, Pharmaceuticals, Emulsifying Agents, Esters.
Low iodine value (1.75-2.40). 100% saponifiable matter.
ALSO . . . Metallic Stearates
For samples and research bulletins, contact your nearest AHCO office
ARNOLD-HOFFMAN
PROVIDENCE, RHODE ISLAND
Arnold, Hoffman & Co. Incorporated • Est. 1815 • Providence, Rhode Island
Offices: Charlotte; Cincinnati; New York; Philadelphia; Providence
Plants:
Charlotte, N. C.
Cincinnati, Ohio
Dighton, Mass.

DON'T MISS THE BOAT

Testosterone is at the lowest price in history. These lower costs have increased the market for this androgen.

Testosterone is available in bulk from Vitamerican for processing into aqueous suspensions or tablets for buccal absorption.

OTHER V. O. C. PRODUCTS

CHORIONIC GONADOTROPIN	TESTOSTERONE PROPIONATE
SERUM GONADOTROPIN	DESOXYCORTICOSTERONE ACETATE
PROGESTERONE	ESTROGENIC SUBSTANCE
METHYL TESTOSTERONE	VITAMIN A OILS, VITAMIN A CONCENTRATES

Don't miss the boat... call or write

VITAMERICAN OIL CORPORATION

FINE CHEMICALS, HORMONES, VITAMINS

1 JOHN STREET. PATERSON 2, NEW JERSEY

Greeff

ANTIOXIDANTS FOR PHARMACEUTICAL AND COSMETIC CREAMS AND LOTIONS

Manufactured by FRIES BROS., Inc.

R. W. GREEFF & CO., INC.

10 ROCKEFELLER PLAZA, NEW YORK, N. Y.

TRIBUNE TOWER, CHICAGO, ILLINOIS

sometimes included in the suppository. Franklin,[29] using suppositories containing aminophylline, sodium pentobarbital and benzocaine for the treatment of moderate to marked asthmatic cases, obtained relief in 69 per cent of the adults and in 94 per cent of children. The discrepancy is explained by the fact that many of the adult asthmatics were chronic cases with pre-existing pathological changes.

The use of combinations is hardly limited to administration by the rectal route. As has been indicated, it is rather common practice to use aminophylline plus various adjuncts for the treatment of bronchial asthma and other conditions. Friedlander,[24] for example, has stated that sometimes a combination of ephedrine with aminophylline with some sedative may enhance the desired action in bronchial asthma. A product meeting this requirement is available on prescription. It consists of plain or enteric-coated tablets containing aminophylline, racephedrine hydrochloride and phenobarbital.

Another type of tablet contains an antihistaminic drug ("Benedryl") and aminophylline. According to Unger and Gordon,[11] the combination gave good results in 30 per cent of cases of bronchial asthma, fair results in 21 per cent and was ineffective in 49 per cent. Side reactions were noted in a rather high proportion of cases, but even the so-called "severe" reactions were not alarming. Somewhat better results were obtained in other studies. Thus, Brown and Brown[30] found that the tablets gave complete relief in 15 of 34 cases of asthma, with partial relief in ten more patients.

Inhalation therapy is a well established method of treating asthmatic patients. It is not surprising, therefore, that aminophylline should also be administered this method. The studies of Prigal and his associates[31,32] indicate that aminophylline is highly effective by inhalation in aerosol form. Indeed, this method of treatment may even succeed in some cases where intravenous administration is ineffective. More recently it has been reported[33] that the inhalation of micronized aminophylline is an effective form of symptomatic therapy in cases of chronic bronchial asthma. The relief from the use of the finely powdered drug is rapid and satisfactory in most mild and moderate cases.

Aminophylline in its various forms and routes of administration is very valuable for the treatment of the more severe condition of intractable asthma or status asthmaticus. This is the phase of the disease in which the patient becomes refractory to epinephrine. Barach[34] considers aminophylline to be the most valuable drug for restoring sensitivity to epinephrine. This authority has recommended the rectal instillation of aminophylline solutions in such cases. He feels that this form of therapy has certain advantages over the intravenous injections commonly used in cases of status asthmaticus. In addition to retention enemas, the drug may also be effective when administered in suppositories.[35]

In his report on the management of status asthmaticus, Eisenstadt[35] recently remarked that, "the bron-

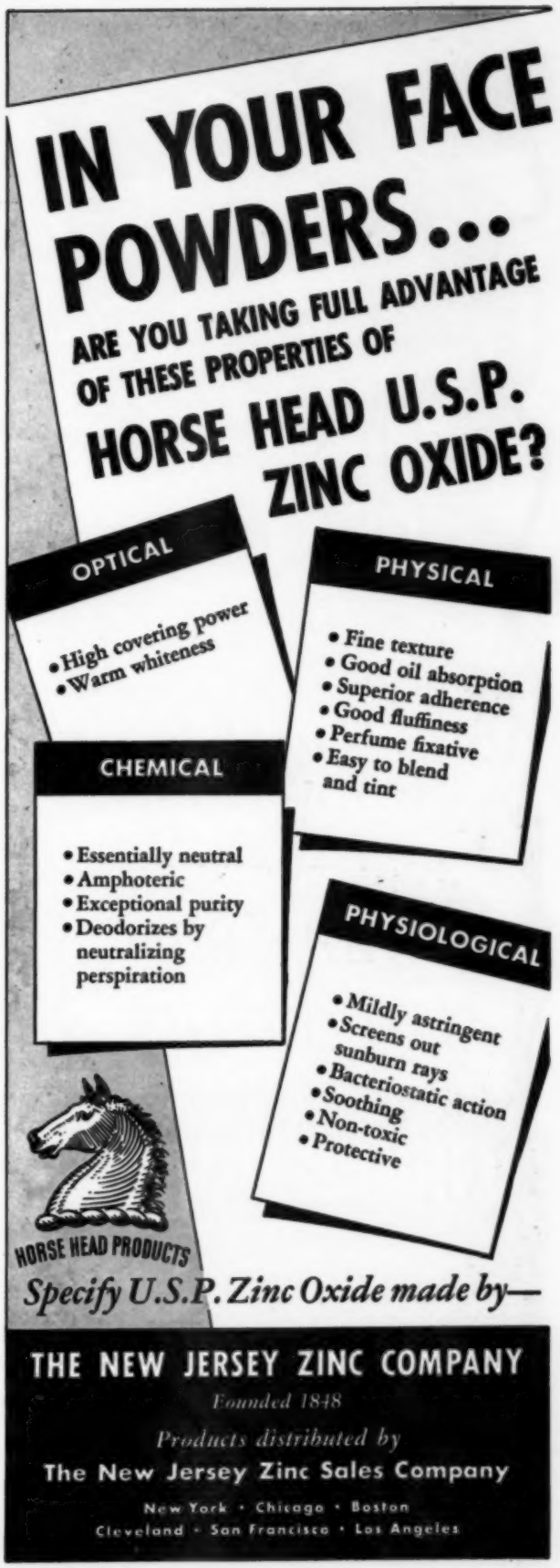
chodilating effect of aminophylline intravenously at times is lifesaving." He warns, however, that caution must be observed in the presence of cardiac complications and that the injection must be given slowly. Nearly a decade ago, in commenting on the value of aminophylline in the treatment of intractable asthma, Brown and Blanton[36] reported that 75 out of every 100 injections gave relief that was often immediate and complete. Occasionally patients may become refractory to the intravenous administration of aminophylline. In such cases, it has been suggested[31] that the drug be given by inhalation.

Of course most of the aminophylline preparations used in the treatment of asthma are also employed in other conditions where the drug is indicated. The drug is very valuable, for example, in the treatment of certain heart conditions. Important in this field is the role played by aminophylline in the therapy of congestive heart failure. Here, among other beneficial effects, it serves as a diuretic and keeps to relieve the burdened heart by encouraging the flow of edema fluids. As remarked by Lorimer[37] the beneficent and often dramatic subjective improvement of the patient assures a place for aminophylline in the treatment of congestive heart failure.

Several years ago, in a consideration of the emergency treatment of acute congestive heart failure, Lyon[38] advised that if morphine is not effective in abolishing the attack, aminophylline should be administered intravenously, the injection being given slowly. He remarks that clinical studies have shown that the drug causes a decline in the intrathecal and venous pressures, with a subsequent dimunition of the dyspnea. It is therefore evident that aminophylline is valuable in both emergency and chronic conditions. In addition to its intravenous administration, the drug may be given orally or by rectum.

The beneficial effects of aminophylline are also obtained in certain coronary artery diseases, such as angina pectoris, coronary thrombosis (coronary occlusion) and similar conditions. Although there is some difference of opinion as to the usefulness of the xanthine drugs for overcoming the pain of these disorders, Boyer[12] has pointed out that the majority of reports indicate that these agents are valuable in the treatment of angina pectoris or acute coronary thrombosis.

Such a view is reflected in the suggestions offered by Hughes[39] for the treatment of angina pectoris. He remarks that one of the xanthine drugs is usually prescribed in the hope of effecting prolonged coronary vasodilation. Aminophylline tablets, either plain or enteric-coated, are popular forms of medication. If hypertension is also present, as is the case in about half the patients, he advises that phenobarbital can be combined with the aminophylline. With respect to coronary thrombosis, Fisher and Zuckerman[40] have noted that aminophylline has been employed freely in the treatment of this condition. They also point out that myocardial failure subsequent to acute coronary



DON'T MISS THE BOAT

Testosterone is at the lowest price in history. These lower costs have increased the market for this androgen.

Testosterone is available in bulk from Vitamerican for processing into aqueous suspensions or tablets for buccal absorption.

OTHER V.O.C. PRODUCTS

CHORIONIC GONADOTROPIN	TESTOSTERONE PROPIONATE
SERUM GONADOTROPIN	DESOXYCORTICOSTERONE ACETATE
PROGESTERONE	ESTROGENIC SUBSTANCE
METHYL TESTOSTERONE	VITAMIN A OILS, VITAMIN A CONCENTRATES

Don't miss the boat... call or write

VITAMERICAN OIL CORPORATION
FINE CHEMICALS, HORMONES, VITAMINS
1 JOHN STREET. PATERSON 2, NEW JERSEY

Greeff

ANTIOXIDANTS FOR PHARMACEUTICAL AND COSMETIC CREAMS AND LOTIONS

Manufactured by FRIES BROS., Inc.

R. W. GREEFF & CO., INC.
10 ROCKEFELLER PLAZA, NEW YORK, N. Y.
TRIBUNE TOWER, CHICAGO, ILLINOIS

sometimes included in the suppository. Franklin,[29] using suppositories containing aminophylline, sodium pentobarbital and benzocaine for the treatment of moderate to marked asthmatic cases, obtained relief in 69 per cent of the adults and in 94 per cent of children. The discrepancy is explained by the fact that many of the adult asthmatics were chronic cases with pre-existing pathological changes.

The use of combinations is hardly limited to administration by the rectal route. As has been indicated, it is rather common practice to use aminophylline plus various adjuncts for the treatment of bronchial asthma and other conditions. Friedlander,[24] for example, has stated that sometimes a combination of ephedrine with aminophylline with some sedative may enhance the desired action in bronchial asthma. A product meeting this requirement is available on prescription. It consists of plain or enteric-coated tablets containing aminophylline, racephedrine hydrochloride and phenobarbital.

Another type of tablet contains an antihistaminic drug ("Benedryl") and aminophylline. According to Unger and Gordon,[11] the combination gave good results in 30 per cent of cases of bronchial asthma, fair results in 21 per cent and was ineffective in 49 per cent. Side reactions were noted in a rather high proportion of cases, but even the so-called "severe" reactions were not alarming. Somewhat better results were obtained in other studies. Thus, Brown and Brown[30] found that the tablets gave complete relief in 15 of 34 cases of asthma, with partial relief in ten more patients.

Inhalation therapy is a well established method of treating asthmatic patients. It is not surprising, therefore, that aminophylline should also be administered this method. The studies of Prigal and his associates[31,32] indicate that aminophylline is highly effective by inhalation in aerosol form. Indeed, this method of treatment may even succeed in some cases where intravenous administration is ineffective. More recently it has been reported[33] that the inhalation of micronized aminophylline is an effective form of symptomatic therapy in cases of chronic bronchial asthma. The relief from the use of the finely powdered drug is rapid and satisfactory in most mild and moderate cases.

Aminophylline in its various forms and routes of administration is very valuable for the treatment of the more severe condition of intractable asthma or status asthmaticus. This is the phase of the disease in which the patient becomes refractory to epinephrine. Barach[34] considers aminophylline to be the most valuable drug for restoring sensitivity to epinephrine. This authority has recommended the rectal instillation of aminophylline solutions in such cases. He feels that this form of therapy has certain advantages over the intravenous injections commonly used in cases of status asthmaticus. In addition to retention enemas, the drug may also be effective when administered in suppositories.[35]

In his report on the management of status asthmaticus, Eisenstadt[35] recently remarked that, "the bron-

chodilating effect of aminophylline intravenously at times is lifesaving." He warns, however, that caution must be observed in the presence of cardiac complications and that the injection must be given slowly. Nearly a decade ago, in commenting on the value of aminophylline in the treatment of intractable asthma, Brown and Blanton[30] reported that 75 out of every 100 injections gave relief that was often immediate and complete. Occasionally patients may become refractory to the intravenous administration of aminophylline. In such cases, it has been suggested[31] that the drug be given by inhalation.

Of course most of the aminophylline preparations used in the treatment of asthma are also employed in other conditions where the drug is indicated. The drug is very valuable, for example, in the treatment of certain heart conditions. Important in this field is the role played by aminophylline in the therapy of congestive heart failure. Here, among other beneficial effects, it serves as a diuretic and keeps to relieve the burdened heart by encouraging the flow of edema fluids. As remarked by Lorimer[37] the beneficent and often dramatic subjective improvement of the patient assures a place for aminophylline in the treatment of congestive heart failure.

Several years ago, in a consideration of the emergency treatment of acute congestive heart failure, Lyon[38] advised that if morphine is not effective in abolishing the attack, aminophylline should be administered intravenously, the injection being given slowly. He remarks that clinical studies have shown that the drug causes a decline in the intrathecal and venous pressures, with a subsequent dimunition of the dyspnea. It is therefore evident that aminophylline is valuable in both emergency and chronic conditions. In addition to its intravenous administration, the drug may be given orally or by rectum.

The beneficial effects of aminophylline are also obtained in certain coronary artery diseases, such as angina pectoris, coronary thrombosis (coronary occlusion) and similar conditions. Although there is some difference of opinion as to the usefulness of the xanthine drugs for overcoming the pain of these disorders, Boyer[12] has pointed out that the majority of reports indicate that these agents are valuable in the treatment of angina pectoris or acute coronary thrombosis.

Such a view is reflected in the suggestions offered by Hughes[39] for the treatment of angina pectoris. He remarks that one of the xanthine drugs is usually prescribed in the hope of effecting prolonged coronary vasodilation. Aminophylline tablets, either plain or enteric-coated, are popular forms of medication. If hypertension is also present, as is the case in about half the patients, he advises that phenobarbital can be combined with the aminophylline. With respect to coronary thrombosis, Fisher and Zuckerman[40] have noted that aminophylline has been employed freely in the treatment of this condition. They also point out that myocardial failure subsequent to acute coronary

IN YOUR FACE POWDERS...

ARE YOU TAKING FULL ADVANTAGE OF THESE PROPERTIES OF

HORSE HEAD U.S.P. ZINC OXIDE?

OPTICAL
- High covering power
- Warm whiteness

PHYSICAL
- Fine texture
- Good oil absorption
- Superior adherence
- Good fluffiness
- Perfume fixative
- Easy to blend and tint

CHEMICAL
- Essentially neutral
- Amphoteric
- Exceptional purity
- Deodorizes by neutralizing perspiration

PHYSIOLOGICAL
- Mildly astringent
- Screens out sunburn rays
- Bacteriostatic action
- Soothing
- Non-toxic
- Protective

HORSE HEAD PRODUCTS

Specify U.S.P. Zinc Oxide made by—

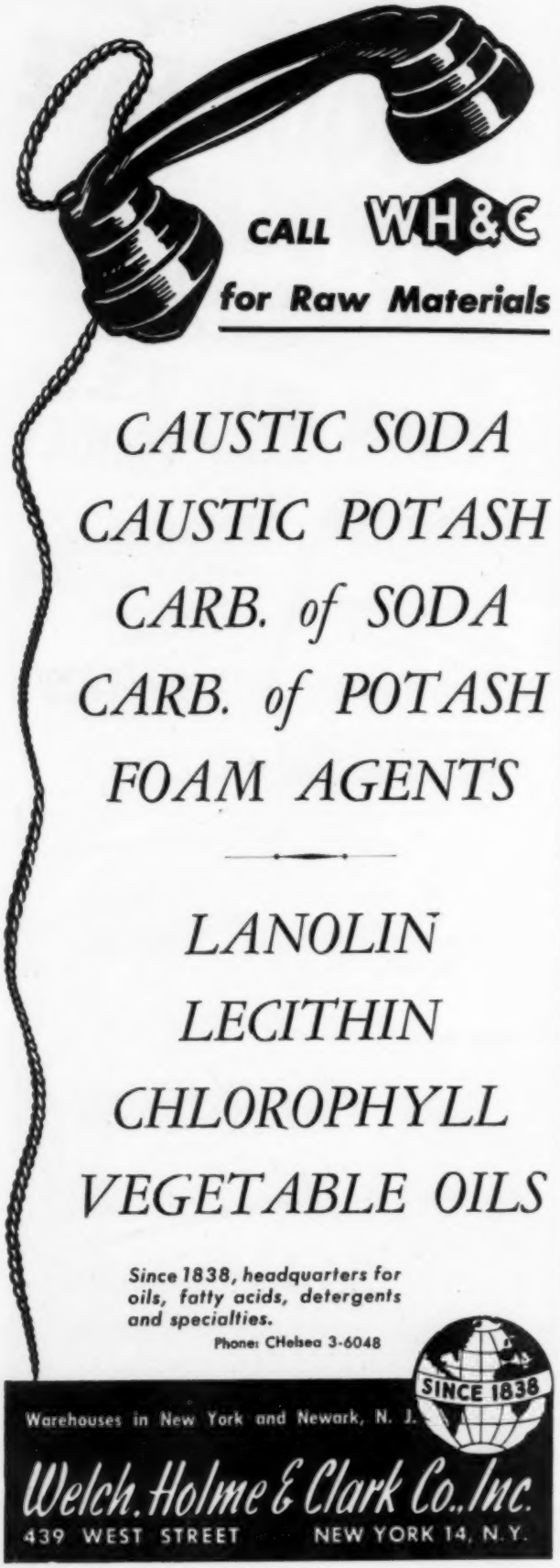
THE NEW JERSEY ZINC COMPANY

Founded 1848

Products distributed by

The New Jersey Zinc Sales Company

New York · Chicago · Boston
Cleveland · San Francisco · Los Angeles



occlusion has been treated with the careful use of digitalis, aminophylline and adequate oxygen.

Various respiratory conditions, including disorders associated with cardiac dysfunction, are also within the realm of aminophylline therapy. One condition for which it is frequently used is known as Cheyne-Stokes respiration. This is a type of breathing in which the respirations gradually increase in depth up to a certain point and then decrease; finally all respiration ceases for half a minute or so and then begins again as before. This kind of periodic breathing is seen in cerebral arteriosclerosis, senility, heart disease and other similar conditions.

The value of aminophylline in the treatment of this condition was well indicated by White[41] in a panel discussion on the management of heart disease. He stated that the drug had its greatest value in improving respiratory function and in clearing Cheyne-Stokes breathing and cardiac asthma. Also indicative is Page's[42] observation that the intravenous administration of aminophylline is valuable in Cheyne-Stokes respiration associated with left ventricular failure. In such instances, the drug rarely fails to restore respiration to normal. He advises that the intravenous administration of aminophylline should be accompanied by a barbiturate by mouth to allay the central stimulation which may follow its use.

Having been impressed by the deep and regular respiration induced by the intravenous administration of aminophylline to patients with Cheyne-Stokes respirations, Sperling and his associates[43] decided to test the value of the drug as an aid in the immediate postoperative period. As a result of such studies they recommended its intravenous administration as a prophylactic measure for the prevention of postoperative respiratory complications.

Aminophylline may be a valued adjunct in various other conditions in which respiratory difficulties may be a symptom. Roberts,[44] for example, has assessed the value of the drug by a trial in the treatment of 200 cases of acute nonspecific respiratory infections. As a result he was able to report that, by relieving bronchial spasm and lessening atelectasis, the drug is a useful agent in the treatment of pneumonitis. Also very indicative is Barach's[45] observation that the administration of aminophylline by mouth on an empty stomach is a valuable method of producing relaxation of the bronchi in a large proportion of patients with pulmonary emphysema.

Also of interest in connection with the treatment of respiratory disorders is the use of aminophylline as an important ingredient of a new type of cough syrup. In this multiple-action product, which is dispensed in a pleasantly-flavored syrup base, aminophylline provides bronchial relaxation, an antihistamine (diphenhydramine) gives an antiallergic effect, and potassium iodide affords an expectorant action.

Aminophylline has also proved its worth in other fields of therapy. It is useful, for example, as an antispasmodic for the relief of biliary colic.[46] Thus, Cole[47]

found the drug capable of relieving typical biliary colic in 10 of 11 patients whose pain was not ameliorated by other antispasmodics and narcotics.

Because of its effect on smooth muscle, Anderson and McIntyre[48] have tried aminophylline in the treatment of dysmenorrhea, the tablets used in their investigations contained a combination of aminophylline, caffeine, acetophenetidin, acetylsalicylic acid and sodium iron phosphate. This preparation produced satisfactory results in 70 per cent of the cases and partial relief in an additional 16 per cent. Aminophylline alone produced slightly less favorable results than did the combination of drugs.

As a result of investigations on a number of patients, Reese and Kant[49] were convinced that aminophylline has a useful place in psychiatric therapy. They recommend it for the treatment of acute phases in psychoses with cerebral arteriosclerosis and hypertension. In their opinion, it is far more sedating than the barbiturate group. In a number of cases, vertigo and various forms of dizziness, headache, insomnia and neurological manifestations were greatly benefited by the drug.

Noteworthy, too, is the suggestion that aminophylline is of value in the treatment of apoplexy. Gilbert and deTakats[50] have said that, in the emergency treatment of this condition, hyperatonic sucrose solution or a concentrated solution of albumin with aminophylline should improve cerebral edema when given intravenously. They feel that, since there is some evidence that the drug lowers spinal fluid pressure, its use seems more rational the extreme dehydration advocated for patients with cerebrovascular accidents or head trauma.

Epstein's[51] studies indicate that intravenously administered aminophylline is rather efficient as an antipruritic agent. Many patients with pruritic dermatosis experience relief of itching within 30 minutes and this may persist for from hours to days, but usually from one to twelve hours. Comparative evaluations[52] showed that aminophylline is the most effective antipruritic agent among the theophylline salts. More recently, Turner[53] has confirmed the value of the drug for combating urticaria. He noted that oral administration provided no benefit.

It has been suggested[54] that the intravenous injection of aminophylline offers certain advantages in the determination of blood circulation time. Of interest in this connection are several investigations[55-56] on the influence of orally or intravenously administered aminophylline on the blood prothrombin time. As is indicated by one such study,[57] the therapeutic use of the drug probably does not involve any increased threat of intravascular clotting.

BIBLIOGRAPHY

1. Grollman, A. & Slaughter, D.: "Cushny's Pharmacology and Therapeutics," Ed. 13, Philadelphia, Lea & Febiger, 1947, p. 394.
2. Council on Pharmacy and Chemistry of the A.M.A.: "New and Nonofficial Remedies," Lippincott, Philadelphia, 1949, pp. 322-8.
3. Fitzgibbon, J. P. & Nathanson, M. H.: Am. Heart J. 17:691, 1939.
4. Carr, H. A.: J. Lab. & Clin. Med. 25:1295, 1940.
5. Waldbott, G. L.: J.A.M.A. 128:1205, 1945.
6. Merrill, G. A.: J.A.M.A. 123:1115, 1943.
7. Bresnick, E., Woodard, W. K. & Sageman, C. B.: J.A.M.A. 136:397, 1948.
8. Unger, L.: Ann. Allergy 2:49, 1944.
9. Unger, L.: J.A.M.A. 124:320, 1940.
10. Anon.: "Aminophyllin with Sedative Therapy," Reference Manual No. 82, Chicago, G. D. Searle & Co., 7 pp.

(*Continued on page 348*)

POLAK'S
FRUTAL WORKS
INC.

ESSENTIAL OILS

AROMATIC CHEMICALS

PERFUME BASES

POLAK'S FRUTAL WORKS
INC.
36-14 35th St., Long Island City 1, N. Y.
Factory at Middletown, N. Y.
Stocks carried in:
Chicago San Francisco Los Angeles

11. Unger, L. & Gordon, B. F.: Ann. Allergy 7:551, 1949.
12. Boyer, N. H.: J.A.M.A. 122:306, 1943.
13. Mountain, G. E.: J. Iowa Med. Soc. 35:324, 1945.
14. Barach, A. L. & Garthwaite, B.: Ann. Allergy 5:297, 1947.
15. Thomas, D. R. & Thomas, J. W.: South Med. J. 40:670, 1947.
16. Goodman, E. G.: N. Carolina Med. J. 6:406, 1945.
17. Carryer, H. M., Prickman, L. E., Maytum, C. K. & Koelsche, H. A.: J.A.M.A. 131.21, 1946.
18. Rackemann, F. M.: New England J. Med. 228:391, 1943.
19. Hyman, C.: J. Med. Soc. New Jersey 47:14, Jan. 1950.
20. Unger, L.: Postgrad. Med. 3:271, 1948.
21. Laird, A. T.: Minnesota Med. 30:386, 1947.
22. Schwartz, R. R.: J.A.M.A. 132:1112, 1946.
23. Segal, M. S. et al: J. Clin. Investig. 28:1190, 1949.
24. Friedlaender, A. S.: J. Michigan State Med. Soc. 7:696, 1945.
25. Harkavy, J.: New York Med. 1:11, Apr. 5, 1945.
26. Council on Pharmacy and Chemistry: J.A.M.A. 135:989, 1947.
27. Lockey, S. D. et al: Ann. Allergy 6:672, 1948.
28. Prigal, S. J., Fuchs, A. M. & Schulwan, P. M.: J. Allergy 16:172, 1946.
29. Franklin, H. L.: New York State J. Med. 47:1242, 1947.
30. Brown, E. B. & Brown, F. W.: New York State J. Med. 48:1465, 1948.
31. Prigal, S. J., Brooks, A. M. & Harris, R.: J. Allergy 18:16, 1947.
32. Prigal, S. J.: Ann. Int. Med. 28:814, 1948.
33. Taplin, G. V. et al: Ann. Allergy 7:513, 1949.
34. Barach, A. L.: J.A.M.A. 128:589, 1945.
35. Eisenstadt, W. S.: J. Lancet 69:201, 1949.
36. Brown, A. G. & Blanton, W. B.: South. Med. J. 33:1184, 1940.
37. Lorimer, R. N.: J. Iowa Med. Soc. 34:425, 1944.
38. Lyon, J. A.: J.A.M.A. 114:835, 1940.
39. Hughes, J. D.: Memphis Med. J. 23:204, 1948.
40. Fisher, R. L. & Zuckerman, M.: J.A.M.A. 131:385, 1946.
41. White, P. D.: J. A. M. A. 136:1032, 1948.
42. Page, S. U.: Canadian M. A. J. 49:195, 1943.
43. Sperling, L., Weisman, S. & Papermaster, R.: Surgery 11:600, 1942.
44. Roberts, A. M.: Stanford Med. Bull. 2:161, Nov. 1944.
45. Barach, A. L.: New York Med. 2:21, Oct. 5, 1946.
47. Gladstone, A. & Goodman, L.: J.A.M.A. 126:1084, 1944.
47. Cole, F. R.: Am. J. Surg. 72:719, 1946.
48. Anderson, H. E. & McIntyre, A. R.: Nebraska State Med. J. 34:17 Jan. 1949.
49. Reese, H. H. & Kant, F.: Am. J. Psychiatry 103:731, 1947.
50. Gilbert, N. C. & deTakals, G.: J.A.M.A. 136:659, 1948.
51. Epstein, E.: Arch. Dermat. & Syph. 53:281, 1946.
52. Epstein, E.: Arch. Dermat. & Syph. 58:47, 1948.
53. Turner, H. H.: J. Allergy 20:307, 1949.
54. Friedfeld, L., Marcus, H. R. & Vorzimer, J. J.: New York State J. Med. 48:2047, 1948.
55. Blood, D. W. & Patterson, M. C.: Proc. Soc. Exper. Biol. & Med. 69:130, 1948.
56. Overman, R. S. & Wright, I. S.: Am. Heart J. 30:65, 1950.
57. Breytspraak, R. W. & Greenspan, F. S.: Am. J. Med. Sci. 212:476, 1946

Pharmaceutical Marketing

(Continued from page 281)

From this series and the preceding charts it can be seen that the use of sound market research permits the wide-awake organization to learn not only from its own successes and failures but also from the successes and failures of its competition. It has been said that we learn from our defeats, not from our successes. Competitive successes are defeats—hence we should be in a position to learn as much as possible regarding our competitor's successes. It is just possible that the most serious weakness in our whole pharmaceutical industry, during the last ten years, has been a rapidly rising population, a skyrocketing consumer income and exceedingly wide profit margins. These factors have combined to either prevent or take the sting out of defeats. All of us know that profit margins are shrinking rapidly—this can only mean that our future mistakes are more likely to result in the use of red ink in the preparation of our annual financial statements unless the knowledge of markets results in more efficient sales operations.

I should not imply by this presentation that prescription and retail sales audits, alone, can provide all of the marketing data which you may need to guide you to the realm of more intelligent selling. They are a big help for if you know where you are, you can plan some kind of action to arrive at a new position. Psychological studies of behaviour, particularly those forces which motivate a physician to specify your product, too are in order.

It can be safely promised that these behavior studies will divulge little that is radically new, but the relative values assigned *by physicians* to various modes of sales promotion may surprise you. It is difficult for most of us who believe "we know the physician" to realize there is much to learn regarding the physicians' attitude toward our businesses.

Behavior studies are of a tremendous value to a concern when properly conducted by competent research technicians who know all of the implications of sloppy research and its inherent dangers. These jobs not only take time, but require help outside your company. I know of no research group in the industry which is equipped to carry on such a project and maintain normal work schedules.

Should you undertake such a project plan it well, develop your study slowly and then have the courage to use it—particularly where it may run counter to valued personal opinions. If the job is done right you will spend twice the time constructing and testing your survey than you employ to activiate, conduct and interpret it. For instance, when Ciba worked with the Psychological Corporation four months were spent readying a research project that required one month's time for field work and another month's time to analyze and construct a report.

Never forget that time factor in any research project. Too many surveys have been dangerously misleading because someone in an organization "knew just what he wanted" and proceeded to get hash. The research technician does not live who can prepare an ideal survey without pretesting it, so why should an individual outside the field expect a competent job which is not pretested?

In this industry I, personally, prefer interviews in all field research work that is not of the audit type. And experience has shown that a guided "open-ended" interview is most productive of usable data. By an "open-ended" interview I mean one that follows no set questionnaire but probes all possible avenues of information as they develop in the course of a contact with a respondant. These may be guided in that certain areas of information become a "must". These interviews need pretesting. You never know what bits of information may develop that may shed an unlooked for light upon a problem until actual field work is done. It is the unusual observation that recurs with a regular frequency that may make or break a survey in this field—and these are only obtained by employing an "open-interview" technique.

A Marketing Research Division need not be a costly operation. You can do an excellent fundamental job at a cost which is less than 0.5 per cent of net domestic sales and a thorough job, including national sales audits of your principal products, at approximately this cost limit provided you have grown in sales stature to a point where your business approximates $5,000,000.

You do not need a top-heavy department to do the job. One top-flight research technician and a truly competent secretary with a sound understanding of

don't gamble
unless you're sure...
it's natural

...and you're not gambling when you use DODWELL "Visco-Measured" gums in your products. By special DODWELL processes the natural gums are improved and *GUARANTEED* as to

- *COLOR—Measured by Colorimeter*
- *CLEANLINESS—Maximum obtained by unique methods*
- *SIZE—Controlled by precision machinery*
- *VISCOSITY—Measured and guaranteed*

gums whole powdered granulated crystal

Karaya "Supertest" Powders n f
Arabic "Premium" Powders u s p
Tragacanth "Selectest" Powders u s p
Locust Bean "Premier" Powder
Agar-Agar Kobe No. 1 Strip or Powdered

Psyllium Seed and Husks Clean and Sterilized

Dodwell and Company, Ltd.
79 Wall Street, New York 5, N. Y.
Gum Division • HAnover 2-1580
Plant and Laboratories • Metuchen, New Jersey

KOMMON SCENTS!

Stimulating to read that the Soviets may enter the Olympic Games. Their U N. delegates should come in first in the walking out contests. And with Gerhardt Eisler coaching, the team should dc well in the bail jumping event.

•

Only Vishinsky's advanced age (the only advance he's ever made without the aid of politics) will keep him out of competition. At 150 lbs., he would be a cinch to win the world's middleweight soap-boxing title.

•

Newspaper men expect that if a Pole, Roumanian, Czech or Hungarian athlete scores ahead of a Russian, the boss of his nation will be charged immediately with "Tito-ism." (Tito is the Yugoslav Communist who believes all men are brothers. He merely questions the paternity of Brothers Stalin, Molotov, et al.).

•

Except for a sudden change of address, the Soviets would be assured of the world's high jump champion. She's Mme. Kasenkina, whose last practice effort was from the Soviet Consulate into a New York hospital.

•

Russia's greatest strength is expected in the relays. With Cominform training, a Soviet runner can expect to get the baton from a "fellow traveler." They'll just mark it: "U.S.S.—Top Secret."

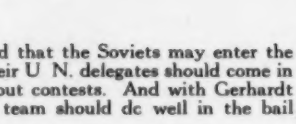
•

In all fairness, one should not be too critical of the Russians. (Especially if one doesn't expect to live very long anyway). They'll be the only people who're wearing short pants because they got no Marshall Plan money to buy long ones.

•

The Cosmetic Industry will view the Olympic Games anxiously. With all nations literally in a sweat to win, it'll be the first post-war new market for deodorants!

George Fiedler



KELTON

Cosmetic Company

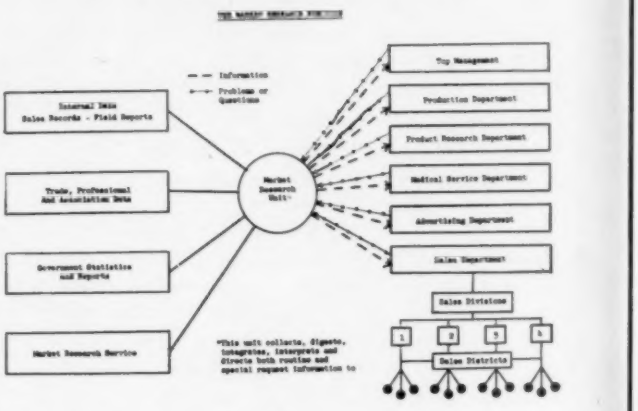
230 West 17th Street, New York 11, N. Y.
763 So. Los Angeles Street, Los Angeles 14, Calif.

Private Label Manufacturers Exclusively
Covered by Product Liability Insurance

statistics can become your starting point—from there on you can decide how you wish to enlarge your department as work loads grow.

Your Marketing Research Unit will be only as valuable to you as your use of the unit permits it to contribute to operational planning.

Chart, The Marketing Research Function



This is purely a Staff Unit which collects, digests, integrates, interprets and directs both routine and special reports to all levels of Management including the top echelon. It is a unit which must be free to call its shots as it sees them but intelligent enough to work as a part of a cooperative team. Top Management, Production, Product Research, Medical Service, Advertising and Sales Departments all should council with and give counsel to your Marketing Research Unit. Your department head should be so placed in your organization that he may obtain the full cooperation from all departments for the asking.

Naturally the value of a Marketing Research Unit is only measured by the extent to which its work is utilized. We take our studies both to the top and bottom rungs of the Management ladder. Representatives in the field get the same kind of basic sales information which is passed on to the "top". There is small nourishment in the fixation of your sales position in a competitive market if, when you decide upon a course of action to correct or further that position, you do not take factual data to the field to emphasize why you wish certain procedures followed. Men appreciate comfidences and will work harder when you explain "why", than when you simply reqest, or demand, instructions be followed.

So if you wish Marketing Research, make its studies a part of data which is used by Top Management to decide basic policy as well as a part of the fundamental information which you carry to National, Divisional and District sales meetings. If you should buy Marketing Research simply to satisfy executive curiosity, I have a suggestion—some of your wives would look lovely in a sheared beaver coat and there is more satisfaction in this expenditure!

The Sales Importance of New Products

(*Continued from page 279*)

products, as for example, high potency vitamin preparations, is an excellent example. Drug store sales of high potency vitamins jumped from 15 million dollars in 1945 to slightly over 56 million dollars in 1949, an increase of about 373 per cent, during this four year period. Vitamins, other than those of the high potency group, fell from a total sales volume of $169,500,000 in 1945 to $132,000,000 in 1948, a decline of 22 per cent.

Successful merchandising of new products takes into consideration the amazing increase in the tempo of the modern world. A revolutionary discovery or invention may be obsolescent in a few years, and obsolete in a single decade. Gun powder, for example, was man's most destructive weapon for six centuries. Yet the atomic bomb, infinitely more destructive, has been outmoded in less than 10 years by the hydrogen bomb. Many of the drugs employed by the Greeks and Romans remained in use until modern time but sulfanilamide, wonder drug of World War II, has already passed its zenith. Sulfanilamide slipped from a production peak of 10,000,000 pounds in 1943 to scarcely 10 per cent of that figure in 1949, largely as a result of the development of the antibiotics. Indicative of the trend is E. R. Squibb's published statement that sulfa drugs contributed 6½ per cent to the corporation's earnings in 1941; 15 per cent in 1943, but only 5 per cent in 1947. Interestingly enough, penicillin rose to sales dominance in the latter year and was responsible for 31 per cent of the firm's business. Antibiotics made a further contribution to sales in 1948.

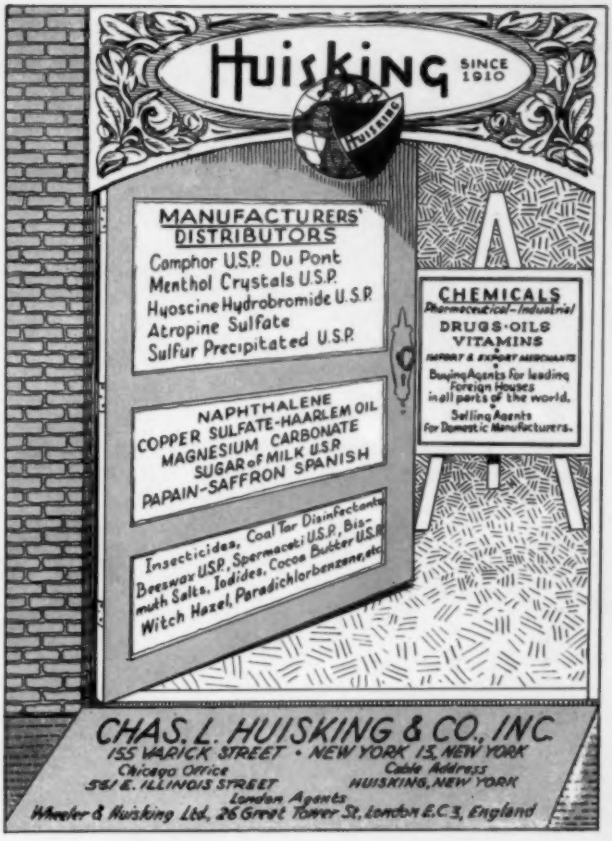
The importance of gauging the market is illustrated by these figures. The production peak of sulfanilamide was in 1943. Pharmaceutical houses which crowded on to the band wagon in the middle 40's might as well have used a sled for the downhill ride.

A statement in Sharp and Dohme's Annual Report for 1948 is pertinent: "Again our rate of increase was made possible by new products emanating from our medical research division. The close coordination of sales activity, and the research function is of prime importance from the standpoint of sales and profit achievements."

Coordination of these activities is a function of management. If management is predominantly sales minded it will see that a sales story is built into a product and not sought after with a fine tooth comb when the package is ready for distribution. Sales executives who have lived with new products from their inception, and taken part in the discussion of scientific and medical groups, approach the selling job with increased enthusiasm and with many of the promotional problems ironed out in advance.

Responsibility for new product development is usually vested in a director of research, who frequently works under the advisement of a committee composed of the heads of scientific, medical and promotional

(*Continued on page 351*)



PEDER DEVOLD® COD LIVER OIL U.S.P.
Norwegian
5 gal. cans, 30 gal. bbls., and 50-55 gal. drums. Attractively lithographed 1 gallon cans. ½ pint, 1 pint, and 1 quart cans for export.
PEDER DEVOLD COD LIVER OIL U.S.P. High Potent. Available in all natural potencies.
VITAMINE BRAND® COD LIVER OIL U.S.P.
Non-Destearinated
DEVOLD VITAMIN A & D FEEDING OILS
VITAMINE BRAND OILS (*Fortified Cod Liver Oils*)
PEDER DEVOLD WHEAT GERM OIL
VITAMIN A & D CONCENTRATES
CAROTENE CRYSTALS
DEVOLD DRY D_3 (A Feed Supplement)

IMPORT P.D. EXPORT
PEDER DEVOLD OIL COMPANY
DIVISION OF CHAS. L. HUISKING & CO., INC.
155 Varick St., New York 13, N. Y. Cable Address: VITAMINE, New York

SANTONIN N.F. VIII
Meeting Requirements of International Pharmacopoeias
ALKALOIDS of AMERICAN MANUFACTURE
SANTONINE COMPANY OF AMERICA
DIVISION OF CHAS. L. HUISKING & CO., INC.
155 VARICK STREET, NEW YORK 13, N. Y. Cable Address SANTONICUS, N. Y.

histaminic cough syrup providing a potent histamine antagonist plus the bronchodilating and vasoconstricting actions of Propadrine hydrochloride and the expectorant action of potassium citrate; Stolic and Stolic Forte Tablets, preparations useful in the control of hypertension; and Delmor Nutrient Powder, a palatable protien-carbohydrate concentrate with essential minerals, vitamins and whole liver substance. Sharp & Dohme also announce the development of Bovimide, a triple sulfonamide suspension useful in the treatment of calf scours and diarrheal conditions in small animals.

SMITH, KLINE & FRENCH LABORATORIES are now introducing Dexamyl, a balanced combination of Dexedrine and Amytal working synergistically to provide symptomatic relief from mental and emotional distress.

TECTO COMPANY has developed a new product to be distributed under the trade name Aerosol COLD-ReLEEF . . . an Atom-fine mist combining five recognized medicants including ephedrine, and packaged in a twelve-ounce pressure dispenser.

The TONI COMPANY introduces a new, eight-ounce Family Size Creme Shampoo, twice the size of the largest unit previously in the Toni line, retailing at an attractive price saving.

The UPJOHN COMPANY announces the release of Zymanic Drops, a liquid preparation of iron and liver supplemented with folic acid and other members of the B-vitamin group. Zymatic offers a compound formula designed primarily for treatment of anemias in infants and children.

NORTHAM WARREN CORPORATION introduces two new polish shades . . . Prize Posy, a blue-red which complements the new colorgenic Cutex Lipstick of the same name; and I.Q., a very bright red team-mate for the I.Q. lipstick. Both are attractively dispensed in appropriate promotional display packages. Cutex Hand Cream has just been repackaged in a new retail price scale.

The S. S. WHITE DENTAL MANUFACTURING COMPANY has adopted the Plaxpak polyethylene bottle for professional use as a package for concentrated Oraline Mouth Wash. The bottle used is an eight-ounce dispenser, equipped with combination spray plug and attached lift-up cap.

WINTHROP-STEARNS INC. offers to the market two new additions to its extensive line. Diodrast Ampul is introduced as a radiopaque agent in special children's dosage ampuls for use in X-ray visualization of the heart and great blood vessels, and Neo-Synephrine Thenfadil hydrochloride is presented as a combination of a new antihistaminic with a highly effective nasal decongestant to combat colds and nasal allergies.

WYETH INCORPORATED announces two new products . . . one an addition to the vitamin line, the other a vaccine for veterinary use. Esorb, a readily absorbable vitamin E preparation, is recommended in pregnancy, peripheral vascular and connective tissue disorders and menopause; and the veterinary product, Newcastle Disease Vaccine is indicated as a safe vaccination of chicks and fowls for the control of Newcastle disease, a highly infectious and fatal disorder of poultry.

"Custom" Hydrogenation

IT is natural that Hooker should be a prime resource for both hydrogenated products and for "custom" hydrogenation. High purity hydrogen is a co-product of the basic Hooker process, the electrolysis of sodium chloride brine. Hooker has sizable facilities for high pressure hydrogenation at Niagara Falls and for low pressure hydrogenation at its Tacoma, Washington plant.

For a more complete story of our experience and facilities, we suggest you write for Bulletin 8 on Hydrogenation.

HOOKER CHEMICALS

Hooker Electrochemical Company
7 Forty-seventh St., Niagara Falls, N.Y.
New York, N. Y. - Wilmington, Calif. - Tacoma, Wash.

GRAVITY CONVEYOR

FOR

SMALL ITEMS

•

¾" O.D. ROLLERS SPACED 14 TO THE FOOT

•

Puts Gravity Power to Work for---
Manufacturers of -

- Confections
- Packaged Foods
- Drugs and Cosmetics
- Small Metal Parts
- Die Castings, etc.

Use "Free Gravity Power" in "Production Lines"

SPECIFICATIONS ON REQUEST

METZGAR CO.
456 DOUGLAS ST., N. W.
GRAND RAPIDS 4, MICH.

The Sales Importance of New Products

(*Continued from page 341*)

departments. The Management Committee of the Reed & Carnrick Institute for Medical Research is in many ways typical. The following divisions are represented—chemical research, pharmacology, bacteriology, medical sciences, clinical medicine, sales and advertising. Members of the Board of Directors are frequently in attendance, thereby expediting later decisions which must be made at a top level. Only after a proposed new product has stood the acid test of these conferences is it approved as a research project.

The contribution of sales management to these conferences includes suggestions for new products (frequently based on ideas channeled to the sales department by the field force), sales forecasts, and summaries of market research and competitive product studies. If other houses have failed to establish somewhat similar preparations, vigorous efforts are made to determine the cause of their failure. At every meeting one thought should be uppermost in the sales manager's mind—"Will the product sell?" He should strive to keep the eyes of the committee focused on the target of sales.

Although no formula has ever been developed which will assure the commercial success of a medicinal agent, collective thinking is by far the best substitute. No one man and no one department has a monopoly of knowledge or ideas. Collective thinking sees the company at its corporate best.

Manufacture of Tablets

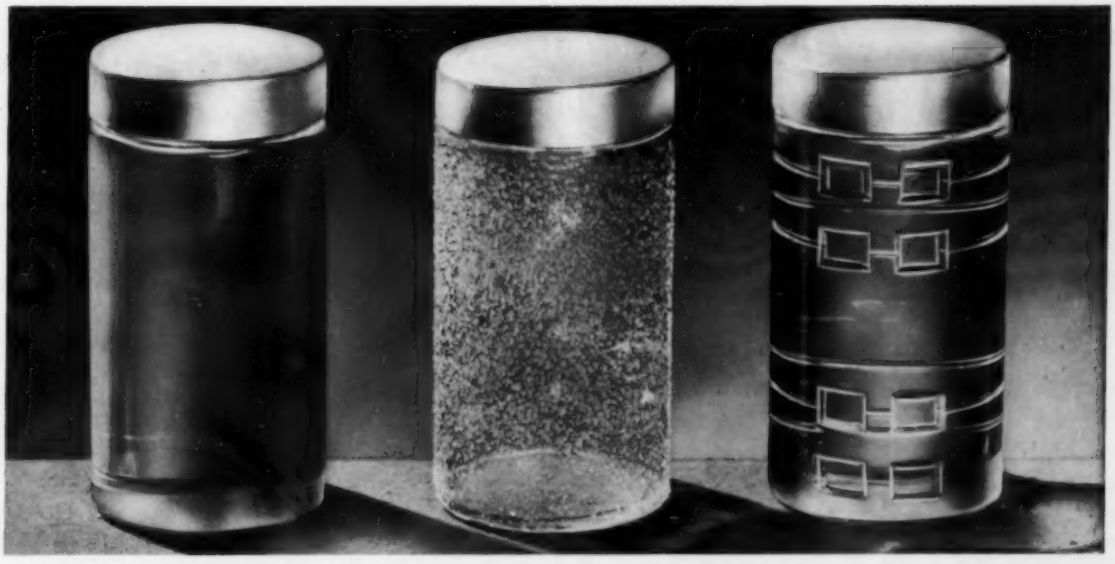
(*Continued from page 271*)

the difference to the layman, but it is a tough job. I tried hard to convince some fellow members at the Engineer's Club of Philadelphia several years ago that pills were not tablets and vice versa and what happened —they call me the "Pill Engineer," so what's the use— I give up.

The manufacture of compressed tablets is not too difficult if you first take the time to absorb the basic fundamentals. Don't jump in with both feet and start out buying equipment here and there and expect to make perfect tablets immediately. If you are successful you can consider yourself mighty lucky—more than likely you won't be and you may also find that you have spent considerably more money on equipment than was necessary.

A great many people decide they are going to make tablets and think all they have to do is to buy a tablet machine, set it up in a corner and presto they are in production. What a shock they get when the punches bind in the die, the powder doesn't feed into the die, the tablets split or cap, stick to punch faces or finally the machine comes to a halt.

To be sure there are a few materials which can be



STICK COLOGNE—**Climbing to new peaks of popularity in these new STICK COLOGNE JARS by the**

RICHFORD CORPORATION

251 4th AVE. NEW YORK 3, N. Y.

Samples on request

Left: No. 48 Plain Round
Center: No. B48 Iced Round
Right: B48 Fancy Round

All have 48 millimeter highly polished brass caps, tested air-tight and saran-film lined.

PRIVATE FORMULA
Tablets and Capsules
BY THE THOUSANDS—
OR BY THE MILLIONS

Over 35 years' experience enables us to render you prompt, accurate, and dependable service in the manufacture of your tablets and hard shell capsules. Our central location expedites delivery to any point in the country. Furnished bulk or packaged.

Vitamin Tablets and Capsules—Tablets—Ointments—Powders

We Invite Your Inquiries

Standard Pharmacal Co.
OF CHICAGO
PRIVATE FORMULA MANUFACTURERS
M. F. Charley, President
847-853 W. JACKSON BLVD. CHICAGO 7, ILL.

PERFUME BASES *of Merit . . .*

CONSTANT research, skillful blending and development of subtle aromatics by the Perfume Chemists of N.B.W. assures the quality of its Essential Oils, Aromatics and Floral Creations.

To be sure of constant high quality and lasting consumer acceptance of your products . . . Rely on NEUMANN-BUSLEE & WOLFE, Inc. where RESULTS have merited your repeat business since 1920.

NEUMANN-BUSLEE & WOLFE
INC.
228 W. Huron St. Chicago 10, Ill.

made into tablets where the materials possess satisfactory cohesive properties, do not require lubrication and can be purchased commercially in a free flowing granular form, but this select list is fairly limited indeed. (i.e. sodium chloride, ammonium chloride, etc.). If you happen to be fortunate enough to be compressing one of these materials on a large scale you know what I am talking about. All you have to do is make the correct adjustments for weight and pressure, keep the hopper filled and out come the tablets. However, these particular products constitute only a small percentage of the average tablet manufacturer's list of items.

A good many of my clients received quite a shock when they first discussed with me their intentions of starting up in the business of manufacturing tablets. They were quite surprised as I explained the necessary operations and equipment required to produce satisfactory tablets.

Possibly some of my readers will be asking why can't you compress powders, what's all this processing for and why?

Before proceeding further it might be advisable to explain how a tablet machine operates.

In the first place a tablet machine, while it produces tablets of a given weight, actually measures the material volumetrically. The machine operates by a gravity fill, therefore the material must be put into such a form that it will flow freely, similar to dry sand or granulated sugar. The material, at this point, is referred to as a granulation and it must also be of fairly uniform particle size, so that uniform die fill is obtained to produce tablets of equal size and weight. The operating principle of the various tablet machines will be discussed in greater detail later.

Now that we know we must have a granulation the question is how do we go about making it correctly.

First, I will describe the various operations. In a later article I will review the equipment which is used for these operations.

There are two entirely different methods of producing granulations:—

1. The wet granulating method in which the ingredients are moistened with water, alcohol or other types of granulating solutions, generally called the binder.

2. The dry method, known as double compression or slugging, in which moisture or solutions are entirely eliminated.

First, let us consider process number one, as this is most generally accepted method in use today. The flow chart shows the complete sequence of operations involved in the manufacture of compressed tablets.

There is no necessity, I feel sure, to go into detail on the first operation, namely weighing out the ingredients accurately. It is a good idea if you are working with potent drugs to have another person check the containers and also the weights of each material. The formula card should be initialed at the time, so that you have a permanent record of how much, when and

who did it for your files. Later on I will show some typical formula cards and work sheets for your guidance.

MIXING. As the name implies this operation consists of combining the active ingredients with a suitable diluent or filler or base as it is generally called in the manufacturing industry. The filler is added to build up the volume of the tablet to any desired size and weight. It also helps to distribute the active ingredients or dilute them, so that taken on a percentage basis a small variation in weight on the finished tablets results in an even smaller variation of the active ingredients. In other words the variation would be negligible.

The most widely used fillers are cornstarch, powdered sugar and lactose. Sometimes they are used in combination. My personal preference is about 25 per cent Starch and 75 per cent Lactose. Sometimes I use 10 per cent 4X sugar and 90 per cent lactose, it all depending on the particular tablet, the ingredients and whether a hard, medium or soft tablet is required. In most cases the amount of starch has to be given consideration. If you use too much you may run into trouble during compression. Lactose and 4X sugar also possess cohesive properties which help considerably.

When working with morphine, codeine, strychnine salts and similar potent drugs always triturate with a small amount of the diluent before adding to the rest of the batch. Anyone who has studied pharmacy will readily understand this precaution, as he, no doubt, had it well drilled into his brain while in college. As a final precaution it is a good idea to pass the triturate or blend through a No. 60 or No. 80 bolting cloth screen. This will put the finishing touch to the job. If you want you can screen all these ingredients before and after mixing. Machines are available for doing this job.

GRANULATING. We now have the dry mixture ready for what I personally consider one of the most important operations in the whole job. Just as a house depends on proper foundations, so does a tablet depend on the type of binder, the amount and method used in preparing the granulation.

Granulating is the process of converting a fine powdery and sometimes fluffy mixture into a form which after being screened and dried will become a uniform free flowing granulation—not too hard—not too soft—but just right. It runs through my mind that some "radio plug" sounds something like that. The granules should bind together to form a tablet. However, what I want to get across is the point that if the granulation is too hard it often requires very considerable pressure to break down the granules to form the tablet and frequently the tablet will have a mottled appearance.

It goes without saying that the tablet likewise will be hard, consequently disintegration will be slow. I have seen many tablets so darn hard that you could have used them for bullets. How long they would take to dissolve in the stomach is anybody's guess. It also generally runs true that if the granulation is too soft it will powder in handling and during the lubricating operation. Quite often such a granulation requires heavy pressure to form a firm tablet. Excessive fines

Fragrances that help sales

It will pay you—with a profitable share of Spring and Summer sales—to consider *now* how to heighten the originality and allure of your products.

Our perfume materials will make a valuable contribution to your creation of *new, appealing* and truly *individual* Perfumes . . . Toilet Waters . . . Eau de Colognes . . Deodorants . . .and Cosmetics.

You can benefit most from the creations of master perfumers which we are offering at moderate prices. Write today for samples and details, including information on our wide assortment of perfumes in bulk.

Creators of the finest perfume bases for every purpose, in every price range.

Essential Oils
Perfume Materials
Aromatic Chemicals

gunning and gunning inc.
601 WEST 26th STREET, NEW YORK 1, N. Y.

ALKALOIDS

GLUCOSIDES---DRUG EXTRACTIVES

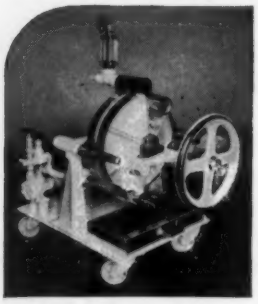
The Recognized Domestic Source of Supply Since 1917

ACONITINE
AGARICIN
ARECOLINE
ASPIDOSPERMINE
ATROPINE
BERBERINE
CHRYSAROBIN
COLCHICINE
DIGITALIN
EPHEDRINE
ESERINE
HOMATROPINE
HYDRASTINE
HYOSCINE
HYOSCYAMINE
LOBELINE
OUABAIN
PICROTOXIN
PILOCARPINE
SANGUINARINE
SPARTEINE
STROPHANTHIN
YOHIMBINE

INLAND ALKALOID CO.

MANUFACTURING CHEMISTS

TIPTON INDIANA U. S. A.



ERTEL PORTABLE

Small Capacity

FILTER

equipped with a three gallons per minute pump.

★ Ertel Model EBW Filter, illustrated, is ideal for small capacity requirements. It will accommodate from two to six Ertel Asbestos Filter Disks which are sealed by a single handwheel which insures alignment.

The same Ertel rigid standards of quality are incorporated in this EBW Model Filter as those associated with the full Ertel Liquid Handling Equipment line.

If you have a problem in filtration write the Ertel Engineering Department. Catalog No. 15 describes Ertel equipment in detail; write for a copy today.

ERTEL FREE LABORATORY SERVICE: Send a sample of your product to us for laboratory test. We will filter it and return for your inspection along with enough recognized Ertel Asbestos Filter Sheets to prove the superior results in your plant.

ERTEL ENGINEERING CORPORATION

KINGSTON NEW YORK

New York City Sales:
40 West 48th Street, N. Y. 19, N. Y.

ERTEL

ASBESTOS FILTER SHEETS • ASBESTOS SHEET FILTERS
CYLINDER TYPE DISC FILTERS • PYROGEN FILTERS
VACUUM BOTTLE FILLERS • PUMPS • MIXERS • CAPPERS

or powder can also cause the poor fellow running the tablet machine plenty of trouble.

I can hear the reader saying "well what constitutes a satisfactory granulation—how do you control such a state of affairs?" Well, I'll tell you brother—experience is the only way you will learn. Ask any tablet maker how he acquired the art and it is just that. There are no set rules, you can read all the literature available, and there isn't much on the subject, and still you will have to feel your way. You have to learn by feel—watch an experienced granulator if you get the chance, notice how he fondles the mass between his fingers and thumb while it is mixing. You might think he is just playing, but nothing doing, he is judging the consistency. He knows when it is done and when to stop further mixing. However, it is not considered safe to put your hand into a mixer while it is operating and this is good advice. You can easily loose your hand. If you want to test it shut off the power. This applies to certain types of mixers, others are relatively safe.

My advice to the beginner is to experiment. Add a little of the granulating solution at a time, let the mixer run awhile. Add a little more and so on. When the material begins to arrive at a consistency similar to damp snow or brown sugar it is about right. This is not an infallible rule, but it will give you some idea. Insufficient binder forms a dry powdery granulation—too much will make it form a dough.

The most widely used binders are gum acacia, glucose (corn syrup), gelatine, syrup, (sugar) starch paste and sometimes just water. If a soft granulation is desired a mixture of alcohol and water is often used. Today there is quite a wide variety of organic water soluble resins which could stand investigation. If the mixture contains powdered extracts or similar hygroscopic substances stay away from water—use straight alcohol or acetone, as the extracts in themselves provide a certain degree of binding property.

I once saw a fellow making Brown's Mixture. He had granulated with syrup. Boy what a mess. He had a wonderful substitute for concrete. It almost required a cold chisel to clean the stuff out of the mixer.

Most binders are made into solutions. Acacia is generally used as 10 per cent or 20 per cent solution—glucose 30 to 50 per cent, gelatine 10 to 30 per cent, syrup 10 per cent up to 16 lbs. to 1 gallon of water. Starch paste generally 1 to 12 or 1 to 16. That is 1 part starch to 12 parts water, etc. Most tablet makers, of course, have their own special preferences for certain strengths and work accordingly.

SCREENING DAMP MASS. In order to form granules the damp mass is then passed through a wire screen usually No. 6 or No. 8 mesh. Machines designed for this purpose are available. I know quite a number of people who do not bother with this operation. I myself very often eliminate damp screening. It all depends on your granulating technique and the materials, also the size of the finished granulation. If it is to be a fairly fine mesh for small tablets it is a good idea to screen after it is about 50 per cent dry and still retains some

moisture. It does help the granulation to dry faster and more uniformly and cuts down the fines.

One piece of advice I can offer at this point is that if the mass, when forced through the screen forms spaghetti, it is a fairly reasonable indication that the mass is too wet and that the amount of binding solution should be reduced the next time.

This statement may not hold true in all cases, but as I mentioned previously you can only work these points out by experimenting. If you were using an oscillating granulator or a hand screen and the mass clogs the screen you will soon be able to appreciate the idea I am trying to put across. If it clogs the screen substitute a larger mesh—dry for a while and then re-screen it through the original size screen.

On the other hand the granulator made by Colton is designed to handle wet masses as it works on the principle of wiper blades. This machine forms spaghetti, but if the granulation is properly made the strings break off into kernels, as many people call them, about ¼" to 5/16" long. On the second screening they are reduced to granules.

DRYING GRANULATION. As the name implies this operation is to remove the moisture or solvents which were added during the granulating process. One of the reasons for screening the damp mass is to speed up the drying process and to make sure that the granulation is uniformly dry.

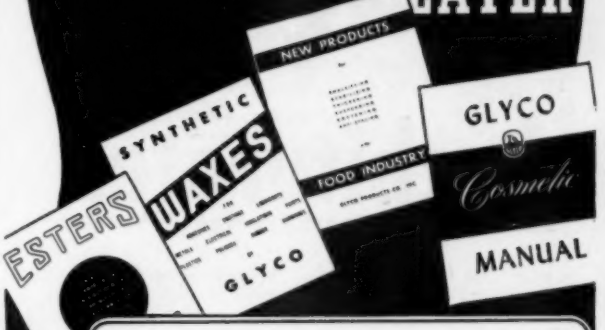
As the pharmaceutical tablet department must dry quite a variety of formulas, very often in small amounts, the shelf type dryers are generally found to be most satisfactory.

In order to permit easy handling the damp granulation is usually spread on strong parchment paper or fairly heavy wrapping paper. This in turn prevents the material from contamination with the trays, which are usually expanded metal or No. 4 mesh wire screen.

Most dryers operate on the principle of circulating hot air over and under each tray and exhausting the moisture laden air. The majority of pharmaceutical tablet granulations can be safely dried at 120°-140°F. However, there are many which are heat sensitive and which must be dried at considerably loser temperatures, some even with cold air only. Therefore, when buying a dryer it is essential that it be equipped with thermostatic controls.

It is a good idea to stir the granulation occasionally during the drying period. Test the back and front of the trays, likewise top and bottom trays to see if one part is drying faster than the other; if so switch them around. This, of course, depends on the design and efficiency of the dryer. Theoretically if the dryer is 100 per cent efficient—provides the same velocity and uniform temperature at all points—this should not be necessary. However, it is possible for the human element to enter the picture and put more material on one tray than another. Reasonable care should be taken to put the same amount of material on each tray and spread it in layers of uniform thickness. This sounds like a lot of work, but it only takes a few minutes and as I men-

THESE CATALOGS NOW
CAN SAVE YOU TIME AND MONEY LATER



Just off the press, these new Glyco catalogs may contain just the answers you want to some of your problems. They describe all of our products and give chemical, physical and application information. They give many suggestions for *lowering costs.*

ESTERS—24-page catalog of specs and use data on polyhydric alcohol fatty acid esters, which are non-ionic surface active agents, emulsifiers and thickeners.

SYNTHETIC WAXES—18-page catalog on high or low m.p., hard or plastic, waxes used in a wide range of industries. Complete physical and use data included.

NEW PRODUCTS FOR THE FOOD INDUSTRY—8-page catalog on emulsifiers, thickeners, stabilizers, whipping and anti-staling agents with descriptions, compositions and specifications.

COSMETIC MANUAL—20-pages of information on how best to use raw materials in cosmetic formulation. Glyceryl monostearates, diglycol stearates and diglycol laurates are among the products described. Complete formulae for many types of cosmetic products are given, along with valuable production information.

Free! for the asking

GLYCO PRODUCTS CO. INC.
BROOKLYN, N. Y.
NATRIUM, W. VA.

GLYCO PRODUCTS CO., Inc.
Dept. T20, 26 Court St., Brooklyn 2, N. Y.

Please send me a free copy of the catalogs checked:

☐ ESTERS by Glyco (24 pages).
☐ SYNTHETIC WAXES by Glyco (18 pages).
☐ NEW PRODUCTS FOR THE FOOD INDUSTRY by Glyco (8 pages).
☐ GLYCO COSMETIC MANUAL (20 pages).

NAME
COMPANY TITLE
STREET
CITY ZONE STATE
TYPE OF BUSINESS

Unsurpassed Quality . . .

GI

barbiturates

barbital • pentobarbital • phenobarbital

Manufactured, as always, to the most exacting standards. Unvarying physical characteristics, designed to meet *all* manufacturing requirements. Write today for latest bulk price list!.

GANE & INGRAM, INC.

Manufacturing Chemists

43 W. 16th St. New York 11, N. Y.

Phone: WAtkins 4-9404

Highest quality! Most complete line! Prompt shipment!

STAINLESS STEEL and MONEL UTENSILS by METALSMITHS

METALSMITHS has been supplying corrosion-resistant equipment to the drug and cosmetic field for more than 25 years. All items designed and fabricated to your needs—provide highest corrosion-resistance, accurate measure, convenient handling, durable service. Try METALSMITHS utensils and compare the value!

Other items are:
Stock pots, batch cans, beakers, shovels.

•

Also corrosion-resistant equipment built to specification.

Write for Catalog - Price List

METALSMITHS

Division of **Orange Roller Bearing Co., Inc.**

568 White Street Orange, N. J.

tioned previously experience helps. Just start out by paying attention to these small details and after awhile it becomes natural.

SCREENING DRY GRANULATION. The dry granulation must now be forced through a screen of fine mesh to provide a uniform granulation. It is quite essential to have the granules practically all the same size, otherwise if you had a mixture of widely divergent sizes you can readily see that when the die or dies are filled with small granules and another with large the weight of the tablets would vary.

The mesh of this granulation is governed by the size of the finished tablet. If the tablets are to be small a fine screen is used. For 1/16″ to 1/4″ diameter a No. 20 mesh fine wire screen would be satisfactory.

Suggested screen sizes:

1/8″ to 3/16″ diameter tablet	No. 20 mesh
7/32″ to 5/16″ diameter tablet	No. 16 "
11/32″ to 7/16″ diameter tablet	No. 14 "
Over 7/16″ diameter tablet	No. 12 "

During this screening operation a certain percentage of powder or very fine granules will be produced. These are generally referred to as fines. Do not worry if the percentage of these fines does not exceed 20 per cent or so. You need some fines to fill in between the granules and produce a smooth tablet. If, however, the percentage of fines is too great you may experience trouble when you start compressing. Too many fines is an indication that the granulation could stand a little more binder, in other words it is too soft and powdery.

LUBRICATING. Most granulations require the addition of a lubricant to permit smooth and easy ejection of the tablets from the dies and to prevent them sticking to the punch faces. If you are using embossed or engraved punches adequate lubrication is very important.

What actually happens when a tablet is compressed? Pressure is exerted between the upper and lower punches causing considerable pressure sideways on the die walls. When the lower punch starts upward to eject the tablet the sides of the tablet binds against the sides of the die, at the same time the tablet is trying to expand, which also increases the friction. After a few minutes of operation in this manner the lower punch will start to bind, and in some cases if it gets too bad will bust the ejection cam on a single punch machine or on rotaries the lower punches will dig into the lower cams, so that the machine will eventually stall.

To overcome this terrible state of affairs all we have to do is add ½ to 1 per cent of a material which will lubricate the granulation.

The most efficient and satisfactory materials are those possessing a high degree of slip. The most widely used materials are calcium or magnesium stearate, air-floated talc. Powdered stearic acid was widely used at one time, but is not used to any great extent today. Small percentage of mineral oil is also used—¼ to ½ per cent is usually sufficient. Other materials such as hydrogenated vegetable oils also work quite well.

Personally I always prefer to screen the lubricant through No. 100 mesh bolting cloth sieve just before adding to the granulation. This eliminates any small lumps which occur in storage, particularly in the softer materials, such as stearic acid and hydrogenated oils. This screening also helps to increase the covering power of the lubricant. On colored granulations it is very important, otherwise you might find white specks here and there on your tablets.

At the same time you are adding the lubricant you can also add the disintegrating agent. The most widely used material for this purpose is cornstarch, generally 5 per cent figured on weight of dry granulation is sufficient. If faster disentegration is required increase the percentage accordingly, but be careful not to add too much, otherwise you may run into capping during compression.

A number of tablet makers of my acquaintance swear by potato starch, but personally I cannot see much difference. Corn or potato starches are good disintegrating agents, due to their great affininty for water. Dried starches absorb water very rapidly, causing the starch grains to swell and literally burst the tablet apart.

When you are making colored tablets it is generally advisable to color the starch previously to the same color as the granulation. If a proportionate amount of starch is also incorporated as a filler (see mixing) this in turn breaks down the individual granules, thus providing for more rapid absorption in the stomach.

In some cases the lubricant can be reduced when starch is used, as starch itself possesses a certain degree of lubricating properties. After the lubricating and disintegrating agents have been incorporated the granulation is now ready for compressing.

In testing tablets for speed of disintegration water or $N/_{10}$ HCl is generally used. In many cases artificial gastric juice is prepared.

DOUBLE COMPRESSION OR DRY METHOD. If you take almost any powdered or fine granular material and compress it under heavy pressure slowly you will find you can produce tablets of some sort. The strength of the tablets will depend, of course, on the cohesive properties of the materials and the pressure exerted. Another important factor is the speed with which the pressure is applied. The longer time required to attain maximum pressure the stronger the tablet.

Of course, there is no mystery behind this phenomenon. You all known that powdered or crystalline materials contain fairly appreciable amounts of air. Under pressure this air is expelled and a fairly dense piece is formed. As mentioned above the more time allowed for this entrapped air to escape the better the tablet or slug.

This is the principle of double compression or slugging, as it is more commonly called. The procedure is quite simple and consists of four operations as follows:—

1. *Mixing*—The active ingredients are mixed with a suitable filler or diluent. At this time the lubricant is also incorporated. A sifter and mixer is generally used for this operation. When the materials are

an EXTRA lab in your plant...

Constant study of techniques and products enables Reheis to grasp your problem quickly . . . suggest the correct solution.

Reheis chemists and laboratories are always available to develop special formulae to meet your requirements . . . or create new products.

. . . *Always* specify Reheis . . . *the* standard for quality.

Manufacturers of Fine Chemicals
Specialists in Aluminum Salts and Pharmaceutical Gels.

Reheis Company, Inc.
(Formerly Schofield-Donald Co.)
BERKELEY HEIGHTS . NEW JERSEY

COLOR CARDS

. . . *printed by PANTONE*

The Pantone method assures accurate color match of all cosmetic shades . . . glossy, dull and embossed effects . . . For counter displays, folders, catalog inserts, wholesale price lists. Prompt delivery. Satisfaction assured.

PANTONE PRESS
461 EIGHTH AVENUE, NEW YORK 1
TEL. LO4-8742

thoroughly combined they are ready for slugging. Whenever possible the filler used should possess some cohesive properties. Lactose is one that is widely used.

2. *Slugging*—As the name implies means the production of slugs or large tablets. There are several reasons for making the slugs fairly large. In the first place fine powders do not flow very well into small die cavities, but do so into larger cavities. Another point is that by producing fairly large slugs the production is increased tremendously. This is important in order to make it a paying proposition. High pressures are required for most slugging operations, consequently heavy duty machines are a must. Generally speaking slugs 7/8″ to 1″ in diameter are most practical, as the die cavities are sufficiently large to accept most materials and the pressure required on slugs of this size fall within the possibilities of the majority of the heavy duty rotary tablet machines available at a reasonable price.

In some cases where satisfactory slugs can be made with less pressure it is advisable to use these sizes and cut back on the pressure. In the majority of cases it is just the reverse and in order to obtain sufficient pressure it is quite often necessary to reduce the die size to ¾″.

In fact I have slugged some materials which require as high as 80 tons per square inch in order to produce a solid slug. Such cases are the exception rather than the general rule.

Slugging or compressing under high pressure at a fairly high speed does not always allow sufficient time for the entrapped air to escape from the die cavity with the result that many of the slugs will pop open into laminates upon ejection from the dies. This should not cause alarm, as the next operation is to break these slugs and pieces down into a granulation of uniform size.

3. *Granulation from Slugs*—The slugs are processed or broken down into a granulation of certain mesh which is governed by the size of the finished tablets. The smaller the tablet the fines must be the mesh—13/32″ No. 14 mesh, 3/16″ No. 20 mesh. Machines such as oscillating granulators or comminators are used for this purpose. Care should be taken to see that the granulation does not contain too high a percentage of fines. About 20 to 25 per cent should be considered as a maximum. If the proportion is higher than this they can be separated through a fine screen and mixed in with the next batch of materials for slugging.

4. *Final Compression of Finished Tablet*—The granulation produced by the preceding operation is now ready for compressing into the finished tablets. Sometimes it is necessary to add just a little more lubricant at this stage, in order to facilitate smooth ejection of the tablets. This depends on the amount incorporated in the mixing operation.

I have found by experience and it has worked quite well in most cases, that it is advisable to incorporate 50 per cent of the lubricant with the powdered material and add the remaining 50 per cent to the final granulation. The amount of lubricant required depends on the nature of the materials and this can only be determined

QUALITY RAW MATERIALS

Our complete stocks guarantee that you can obtain the exact grade and quality for your requirements without delay.

BEESWAX, sunbleached and yellow
Refined U.S.P.

TRAGACANTH GUM, all grades

KARAYA GUM, all grades

STEARIC ACID, fancy triple pressed

QUINCE SEED, Persian, recleaned

also

SPERMACETI WAX CERESIN WAX
MENTHOL

and all other cosmetic raw materials. Samples on request

Write for latest stock list

WALTER H. JELLY & CO.
INCORPORATED
412 N. Western Avenue Chicago, Illinois

TRADE-MARK RECORD

for Perfumes, Toilet Preparations, Soaps

Covering All Trade-Marks in Class IV and VI

Soap Preparations
Perfumes
Cosmetics
Depilatories
Manicure Preparations
Foot Preparations
Permanent Wave Supplies
Hair Preparations
Men's Toilet Preparations
Tooth and Mouth Preparations
Miscellaneous

Over 35,000 trade-marks for quick reference and checking.

768 Pages. Price $25

DRUG & COSMETIC INDUSTRY
101 W. 31st St. New York 1, N. Y.

by experimentation. If the original mixture does not bind to any appreciable extent start out with say ½ per cent calcium or magnesium stearate in mix and ½ per cent in final granulation.

Before we leave the subject of double compression it might be well to compare this method with the wet method. Double compression has fewer operations, eliminates addition of aqueous solutions of binders and subsequent drying operation, which is expensive in most cases. By using double compression you are assured that the active ingredients have not uudergone any chemical change, which is possible in the wet process with materials that are sensitive to moisture or heat.

One of the most outstanding applications of the slugging process is its use in the manufacture of aspirin tablets and aspirin combinations, such as AP&C tablets.

It is a well-known fact that acetylsalicylic acid (aspirin) is hydrolyzed in the presence of moisture. Quite often I am called into a plant on such problems where they have a mixture containing acetylsalicylic acid and the tablets after being packaged develop an odor of acetic acid or feathery crystals start forming on the sides of the bottles. In most cases I find that they granulated with starch paste or another aqueous solution which is causing their trouble. Double compression would have eliminated their worries.

While the double compression is the answer and in many cases the only satisfactory method of making some tablets, there are quite a number of cases where it does not work. Some materials do not possess any cohesive properties and you can press them from now till "doomsday" and never make a good slug. Therefore, I wish to caution my readers not to expect miracles immediately.

In the case of light fluffy materials a great deal of patience is often required in order to make the material flow from the hopper and then keep it moving in the feed frame to prevent it bridging over the dies instead of falling into the cavities. In such cases mechanical agitators must be used to overcome this trouble.

As this article is concerned with pharmaceutical tablets only I might add that the majority of such products can be made to flow adequately. However, in the other fields that I cover there are many real headaches, but these have been overcome by patience and perseverance.

So much for the two methods of preparing the granulations, which I trust give you a clearer picture as to what is involved.

Next month I will discuss the various types of machines and equipment which are used for the different operations.

(To be continued)

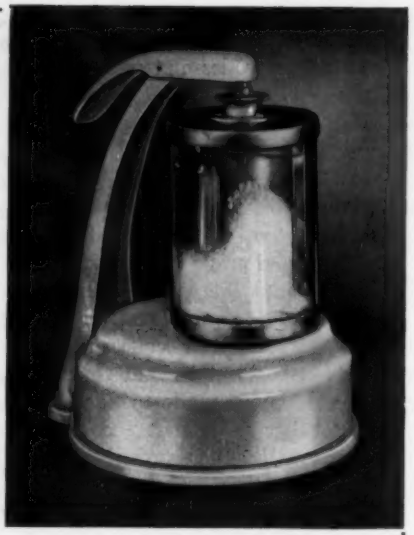
Plastic Packages

(Continued from page 275)

material could be dispersed directly to the hair and then rubbed appropriately. If being used by one's

THE SEARCH
is always
FOR SOMETHING
BETTER!
CHOLESTEROL IN ITS MOST ACTIVE AND EFFICIENT FORM
the AMERCHOLS
are Naturally better
NON-IONIC EMULSIFIERS, EMOLLIENTS AND PENETRANTS
The AMERCHOLS are surface-active agents which are Naturally good for the skin. Of Natural Origin, they represent odorless, color-free forms of cholesterol and related rare sterols which we isolate in purified form from animal tissues. They are stable in the presence of acids, alkalies and most drugs.
WE KNOW OF NO CASE OF ALLERGY DUE TO AN AMERCHOL
For complete information write on your company letterhead for your copy of our technical booklet. Contains valuable data on the use of the Amerchols in O/W and W/O emulsions. Formulas for all types of creams, lotions, hair preparations, etc.
Our Research Laboratories are available to you for advice and information at all times.
Have you tried AMERCHOL L-101 Liquid Cholesterol Penetrant for your hair preparations?
LABORATORY DATA
AMERCHOL
STEROL PRODUCTS
AMERICAN CHOLESTEROL PRODUCTS
• INCORPORATED •
MILLTOWN NEW JERSEY

Blendette



AUTOMATIC POWDER BLENDER

Key to individual powder blending.
Used in Retail Stores and Laboratories.

POWDER TONERS TRAYS

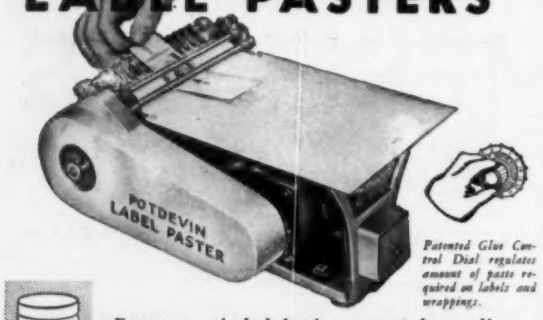
For complete information

Blendette Manufacturing Co.

2355 Jerome Ave. New York 53, N. Y.

speed up production with

POTDEVIN
LABEL PASTERS



Patented Glue Control Dial regulates amount of paste required on labels and wrappings.

Economy-minded business men have discarded more expensive methods of labelling for modern, efficient POTDEVIN Label Pasters. Savings in work hours and stock costs quickly make up the cost of your POTDEVIN . . . and the work is always clean and neat.

Models available for 6, 8½, 12 and 18 inch labels, hand driven and motor driven.

10 Day FREE Trial Offer

Label Paster Literature on Request

POTDEVIN MACHINE CO.

1257 38th Street, Brooklyn 18, N.Y.

Designers and manufacturers since 1893 of equipment for Bag Making, Printing, Coating, Gluing and Labeling.

POTDEVIN

self, the danger of breakage is minimized. In the normal use of the shampoo it is recommended that two applications be made. The container would, therefore, probably be handled with "soapy" hands during the course of the second application, a situation which is more than normally hazardous. Certainly its use under a shower would be easier than would be a glass container.

The greatest portion of the suggestions contained in this article have not been subjected to actual use tests. The ideas on their face value may appear to be sound, but also there may be a large number of difficulties apparent in actual use. Therefore it is urgently hoped that all necessary provisions would be made for their type of testing before the products are placed on the market. The author feels that the plastic bottle is a normal step in the evolution of a package which may be used more easily. This greater convenience will be bound to increase the number of users of the product contained. However, the polyethylene container is far from the answer to everything and the glass container is better adapted for some materials. Glass lends itself to more attractive possibilities from an aesthetic standpoint and probably will be preferred for perfumes and colognes for that reason. Glass, in addition, is more impervious to deleterious effects from contained constituents than is the polyethylene and will retain its position there.

The polyethylene container is capable of transforming certain operations, otherwise regarded as chores, into an easy ministration and therein lies its charm. As time goes on undoubtedly there will be improvements made in structural design to improve dispensation of the contained liquids. The future therefore appears to be bright.

Management Forum

(*Continued from page 312*)

the Jones CMV. Conceived and engineered to meet the need for a fully adjustable machine, capable of handling a revolutionary range of sizes, it can be quickly adjusted for an infinite number of carton sizes ranging from a minimum of ½ x ¾ x 2½", to a maximum of 3¼ x 3¼ x 8".

In operation, the machine feeds a folding carton (airplane or reverse tuck) from a magazine, opens it, and tucks the bottom flaps. Held securely by the transport lugs and guide rails, the cartons are carried upright along the loading stations. A maximum of three operators can be used to insert the load in the open top end of the carton, after which the top flaps are tucked and the finished package discharged for subsequent handling. Machine speed can be quickly changed thruout a range of 25 to 120 cartons per minute

Extremely high operator efficiency is possible on a wide variety of loads. One operator can easily insert bottles, tubes, or similar products at 100 per minute. Where corrugated liners, leaflets, or other inserts are used, space is available for additional operators.

All settings are precalibrated, and all parts can be

adjusted quickly and easily to the correct position when changing from one size to another. Repeated tests have shown that even the most extreme size change is made in not more than 30 minutes.

According to Mr. Wickliffe Jones, president of the company, the machine fills a real economic need, long recognized by users and manufacturers of packaging equipment. For those products which are not manufactured in sufficient volume to justify fully automatic machines, the Jones CMV, at low cost, almost completely mechanizes the loading operation. It is especially useful for short runs of many sizes, or where the nature of the load is such that fully automatic handling is not feasible.

Descriptive literature is offered without obligation.

RECENT PATENTS

2,485,686—**R. Bacon—Hair Curler.**

2,485,859—**Carlo Erba—Histadine and Leucine Preparation.**

2,486,181—**Abbott Labs—Process of Preparing Crystallin Salts of Penicillin.**

2,486,374-5—**Sharpe & Dohme—Benzoic Acid Esters of Alicyclic (Secondary) Amino Alkanols.**

2,486,580—**Shieffelin & Co.—Estrogenics. Alpha, gamma-di (acyloxyphenyl) propanes.**

2,486,792-6—**Ciba—Aryl-Carbalkoxy Piperidines.**

2,486,937—**E. A. Ferguson, Jr.—Digitalis and a water-soluble cellulose ether, effective to afford complete fixation by heart muscle with slow rate of absorption for maximum efficiency.**

2,487,018—**Upjohn—Penicillin process involving addition of p-hydroxy-phenyl acetic acid to liquid culture medium.**

2,487,050-1—**Merck—Biotin Intermediates.**

2,487,075—**Schering—Aryl-Alicyclic Carboxylic Acids.**

2,487,125—**E. B. Gilleland—Hair Curler.**

2,487,336—**W. E. Hinds—Penicillin Coated With Jojoba wax.**

2,487,391—**Am. Cyanamid—2-Phenacylpyrinidines.**

2,487,393—**Hoffmann-LaRoche—Folic Acid Process.**

2,487,668—**C. Pfizer—Separating Penicillins F & G.**

2,494,678—**Les Francais—Separating progesterone from Cholesterol.**

2,494,745—**Am. Cyanamid—Preparation of Penicillin-Like Compound.**

2,494,930—**R. de Montaner—Iodinated Sulfonamides.**

2,495,298—**A. Szent-Gyorgyi et al—Preparation of Thrombin.**

2,495,370—**J. M. Field—Hair Remover.**

2,495,404—**Geigy—Alkoxyphenyl-alkyl-Allyl Amines.**

2,495,772—**Parke, Davis & Co.—Beta-(2-Biphenyloxy) Ethyl Beta-Haloalkyl Amines.**

2,496,064—**The Jewish Hospital of Brooklyn—Certain Iodinated Hydroxyphenyl Cycloaklyl Carboxylic Acids.**

2,496,270—**Synergistics, Inc.—Skin Dressings with Fugitive Colors, Red, when Applied, Became Colorless After Application.**

2,496,326—**Winthrop-Stearns—Preparation of 3-(Lower Acyl) Amino-3-Caralkoxy-2-Piperidones.**

2,496,328—**Colgate Palmolive Peet—Preparation of Polyhydric Alcohol Esters of Fatty Acids.**

2,496,416,7—**Merck & Co.—Penicillamines and Oxazolone Derivatives.**

YOU SAVE MONEY
RIGHT DOWN THE LINE
with LUSTEROID
PACKAGING

√ LOWER FIRST COST
Savings from increased production are now being passed on to Lusteroid customers in the form of a 10% price reduction.

√ LOWER HANDLING COST
Though remarkably light in weight, Lusteroid vials and tubes are strong, rigid, shatterproof. No protective partitioning or packing are required.

√ LOWER LABELING COST
Lusteroid's printability in any colors eliminates need for separate labels. Your name and message become an integral part of these packages.

√ LOWER SHIPPING COST
With Lusteroid's light weight and the elimination of protective packing, shipping expense is reduced to a minimum.

On top of all these savings, Lusteroid vials and tubes provide high quality, attractive, colorful packaging that displays as well as protects your product.
For distinctive, low-cost packaging in step with today's merchandising requirements, it will pay you to look into Lusteroid.

Standard diameters from ¼" to 1½"; standard lengths up to 6". Cork, slip-on and screw-cap closures.

Write for samples and prices today.

LUSTEROID CONTAINER COMPANY, INC.
10 West Parker Avenue, Maplewood, New Jersey

falba
Reg. U. S. and Foreign Countries
ABSORBS 5 TIMES ITS WEIGHT OF WATER
THE ORIGINAL ABSORPTION BASE
Write for suggested formulae
Pfaltz & Bauer, Inc.
EMPIRE STATE BLDG., NEW YORK 1, N. Y.

ALL GRADES OF
REFINED GLYCERINE
U. S. P. B. P.
YELLOW DISTILLED
HIGH GRAVITY
DYNAMITE
REFINERIES LOCATED AT
★ Brooklyn, N. Y.
★ Jeffersonville, Ind.
★ Jersey City, N. J.
★ Berkeley, Calif.
★ Kansas City, Kans.
COLGATE-PALMOLIVE-PEET CO.
GLYCERINE DEPT. • 105 HUDSON STREET
JERSEY CITY 2, NEW JERSEY

ALCOLAN
Self emulsifying absorption base—produced from selected Lanolin fractions—forms lustrous white w/o emulsions—for cosmetic creams and medicinal ointments.
Manufactured by
LEADERS in LANOLIN RESEARCH
ROBINSON WAGNER CO., INC.
110 EAST 42nd STREET • New York 17
LANOLIN

YOUR PROBLEMS will find considerate and careful attention in our well equipped PRIVATE FORMULA PLANT.
Unsurpassed in the development and compounding of Private Formulas.
Complete Laboratory Facilities. For Quotations Call or Write:
AMINO PRODUCTS CORP.
1201 North La Brea
Los Angeles 38, Calif.

2,496,450—**Univ. of Pa.—19-Nordesoxycorticosterone.**
2,496,848—**Wyeth—Crystalline Penicillin Salts.**
2,496,882—**J. R. Geigy—N-Aroy Alanine Amides.**
2,496,955-8—**Upjohn—Piperidines.**
2,496,968—**Burroughs Wellcome—Alpha, Beta-2,2'-Tetramethyl-4:4'—Dihydroxystilbene.**
2,497,730-1-2—**Merck—Hydroxy-pyridines.**

READERS' QUESTIONS

HAIR DRESSING: Please send me a formula for a hair tonic containing no alcohol, but the consistency should not be as heavy as "cream oils". Chicago.

From your letter I gather that you want a liquid hair dressing rather than a hair tonic, and the following hair dressing is typical:

Odorless kerosene	**20.00**
Light white mineral oil	**49.00**
Olive oil, odorless	**29.97**
Perfume	**1.00**
Preservative	**0.03**

If this is not what you had in mind, please be more specific.

LIQUID ANTI-PERSPIRANT: I would appreciate receiving a formula for an underarm anti-perspirant that will not have a harmful effect on clothes. I prefer this in a liquid type. El Paso.

To my way of thinking, it is practically impossible to guarantee a product that is entirely free from harmful effects on fabrics. However, a typical and easily prepared liquid product can be made from:

Aluminum chloride	**15.0**
Water	**81.4**
Glycerine	**3.0**
Propyl parahydroxy benzoate	**0.1**
Perfume	**0.5**

SHAVING CREAM-LATHERING TYPE: We wonder if you could give us a formula for a good shaving cream of the regular type, not brushless. San Jose.

I think you will find the following procedure, as given by Thomssen, will meet your requirements for a good shaving cream:

Stearic acid (triple pressed)	**260**	**lbs.**
Potassium hydroxide U.S.P.	**41**	"
Sodium hydroxide U.S.P.	**8¼**	"
Witch hazel	**20**	"
Borax	**3**	"
Water	**230**	"
Coconut oil shampoo base (60% soap)	**120**	"
Glycerine C.P.	**160**	"
Mineral oil	**5**	"
Perfume	**2**	"

To make this formula follow these directions:

1. Melt one half the stearic acid (130 lbs.) in a corrosion resisting kettle; add the mineral oil.
2. In another kettle, a clean iron one will do, pour about

one half the water, all the borax, the glycerine and the potassium and sodium hydroxides. Heat slightly and mix until dissolved.

3. Transfer lye solution (2) into the mixer and pour the molten stearic acid (1) into the lye with the agitator in motion. Continue to mix slowly with some heat if necessary for half an hour.

4. The coconut soap base has been diluted with the rest of the water, in the meantime, by the use of heat and stirring.

5. Run the soap base solution (4) into the mass (3).

6. In the interim, the rest of the stearic acid has been molten. This is now run into (5) and the mass is slowly agitated until it is smooth and homogeneous.

7. At this point a composite sample is withdrawn and an analysis for free fatty acid is made. This should be adjusted to about 4 per cent.

8. Cool the mass down to under 120°F. by stirring constantly and add the witch hazel and perfume. Continue stirring until smooth.

9. Remove from kettle and store in stainless steel cans for one week before filling.

DEODORANTS AND UNDERARM SHAVING: Can you kindly explain to me why most deodorants caution the user against using the product within twenty-four hours after shaving? Compton.

It is my impression that this procedure is advised in order to avoid further injury to a skin which has already been slightly traumatized by the use of a razor.

LANOLIN PERMANENT WAVE CREAM: Kindly send us a formula for a creamy permanent wave product containing lanolin. Odense.

A lanolin permanent wave cream can be made with the following formula as a basis for further experiment:

Lanolin, anhydrous	**15.0**
Wool wax alcohols	**3.5**
Petroleum jelly, long fibre	**10.0**
Ammonium carbonate	**8.0**
Potassium carbonate	**2.0**
Borax	**3.0**
Sodium sulphite	**5.0**
Water	**53.5**

CREAM SHAMPOO: Some time ago, if I remember correctly, you published a formula for a synthetic detergent—containing cream shampoo. Would you please repeat the formula for my benefit? Paris.

I believe that the following general formula, for further experiment and improvement, comprises the preparation referred to in your letter:

Synthetic detergent paste	**60**
Stearic acid	**10**
Borax	**8**
Water, to make	**100**

FOUNDED T & B 1856

The Symbol of Standardisation

GUMS

ARABIC
TRAGACANTH
KARAYA

WHOLE GUM—Cleaned and repacked before shipment.

POWDERED GRADES—Standardized by milling under strict laboratory control.

GRAIN GUMS—Graded to uniformity and standardized.

T & B STANDARDIZED GUMS are your best protection against production difficulties.

All Powdered Gums Standardized by Laboratory Control

THURSTON & BRAIDICH
286 Spring Street New York 13
Represented in Chicago by A. C. Drury & Co., Inc.

GUMS
ARABIC—TRAGACANTH—KARAYA
(Whole, granular or powdered)

HYDROSULFITE of SODA
(Pharmaceutical grade)

GELLOID
(Pure calcium Carragheen sulfate)

SULPHONATED OILS
(Vegetable and mineral bases)

VISCO GUM E
(Specially prepared for wave-set solutions)

Ask for "The Story of Water Soluble Gums"

WOLF BRAND PRODUCTS
JACQUES WOLF & CO.
Chemicals PASSAIC, N. J.

THE THIRD EDITION OF
MODERN COSMETICS

MODERN COSMETICS, published by the Drug & Cosmetic Industry, was the first book on the formulation and manufacturing procedure of cosmetics to be published in America. It was an immediate success. In two previous editions eight thousand copies were sold in America and in forty-two foreign countries.

The Second Edition of MODERN COSMETICS has been out of print for three years. During that time we have received more that a thousand inquiries for this work. But rather than bring out a hurry-up job to meet the urgent demand we decided to wait.

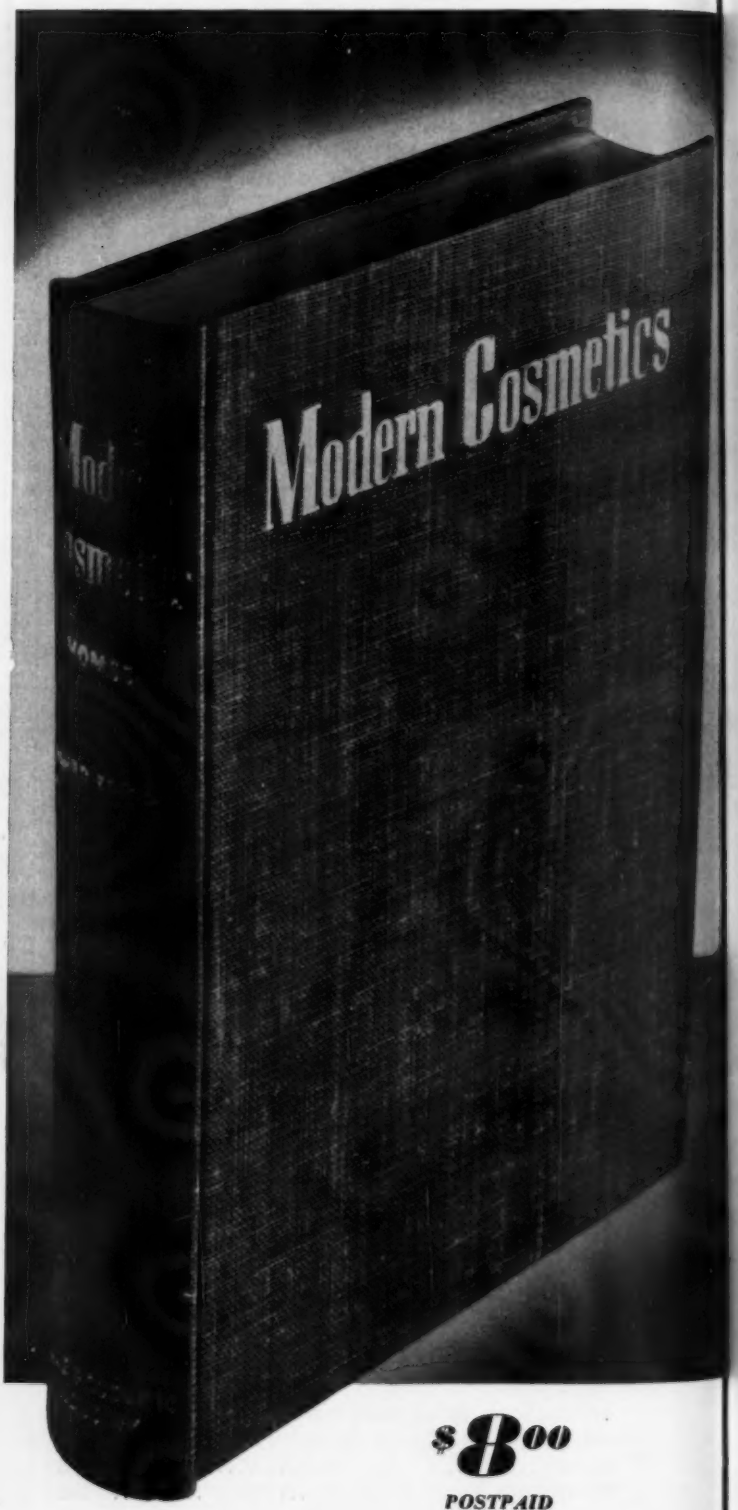
E. G. Thomssen, B.S., A.M., Ph.D., Chemical Consultant, Author of "Soap Making Manual," "Modern Soap Making," and well known contributor to Technical literature, was engaged to completely rewrite this new Third Edition—to bring to it all the new developments of the past ten years in manufacturing instructions, materials, and formulas.

To those who have made MODERN COSMETICS their handbook we say—this new edition will be infinitely more useful to you, because of the scope of new material, new tested formulas, and the correction and modernization of the procedure in formulation.

Chemist, factory manager, perfumer, owner—anyone interested in cosmetics will find MODERN COSMETICS a valuable help in business. It is a technical book, filled with formulas, procedure, manufacturing practices, yet so clearly and simply written that even one not connected with the industry can understand its text.

The most experienced chemist or factory manager will find in its wealth of information, useful methods new to him. The inexperienced man or woman who wants a clear understanding of the industry, wants to know something about how cosmetics are made, who is working on a small scale with the handicap of little experience or knowledge, will find the book easy to understand, a great help and guide.

To those who wish to procure MODERN COSMETICS, to the newcomers in the industry, we say—here is a book that, because of its completeness, the simple and easily followed instructions, the clearness with which every problem and every phase of cosmetic manufacture is discussed, the authority of a standard work, is well worth its weight in gold to you. For with it, you have a firm, thorough understanding of cosmetic manufacturing.



MODERN COSMETICS

by **E. G. THOMSSEN**
B.S. A.M. Ph.D.

644 Pages **70 Chapters**

$8.00
POSTPAID

DRUG & COSMETIC INDUSTRY
101 West 31st Street **New York 1, N. Y.**

High Grade COSMETIC Powders

Tamms

● Powdered Talc ● Infusorial Earth
● English Kaolin ● Clay and Silica
● Precipitated Chalk

Send today for prices and samples.
Write us about your special needs.
Dept. RM-11

TAMMS INDUSTRIES, Inc., 228 N. LaSalle St., Chicago 1

MOULDS

for
LIPSTICKS
MASCARO
SUPPOSITORIES
STYPTIC PENCILS

and **DIES** for ROUGE COMPACT POWDER

Write for Catalog

A. CAVALLA, INC. 163 West 18th Street, New York, 11, N.Y.

PHARMACOPOEIA

of the

United States

Thirteenth Revision

$8.00 postpaid

Book Department
DRUG AND COSMETIC INDUSTRY
101 WEST 31st ST. NEW YORK 1, N. Y.

Cosmetries Inc.

21 Irving Place *New York 3, N. Y.*

PRIVATE FORMULA
MANUFACTURERS OF
COSMETICS AND TOILETRIES

BULK AND COMPLETE PACKAGING SERVICE

Skilled Factory Employees
Progressive Management
Personalized Service
Perfected Details

REPUTATION BASED UPON PAST PERFORMANCE

MYSORE GOVERNMENT
Sandalwood
~~ Oil ~~

Distilled from
Santalum Album

{ INSIST ON ORIGINAL CANS AND CASES }

Sole Agents for the United States
In Canada: *Sole Agents*
W. J. BUSH & CO. (*Canada*) Ltd. Montreal

W. J. BUSH & CO.
(Incorporated)
Essential Oils
New York
Chicago National City, Calif. Montreal

SEIL, PUTT & RUSBY, Inc.

Earl B. Putt, President and Director
Alfred S. Moses, Vice President
Stephen S. Voris, Ph.D., Chief Chemist

Analytical and Consulting Chemists
Formerly Experts for U. S. Dept. of Agriculture

Analyses Made — Formulas Developed
Research Investigations Conducted

Specialists in the Analysis of

Beverages — Essential Oils
Flavoring Extracts — Toilet Preparations
Foods — Spices — Drugs
Proprietary Medicines — Special Formulas
Pyrethrum, Rotenone and other Organic Insecticides

Lab's: 16 East 34th St. New York, N. Y.
Telephone MUrray Hill 3-6368

IMPROVE YOUR FORMULA

Perhaps I can make it taste better, smell better, look better and keep better. Either Medicinal or Cosmetic.
Also, labeling and advertising revised to conform with FEDERAL and STATE laws and regulations.

GEORGE W. PEGG, Ph. C.
Consulting Chemist
75 LAFAYETTE AVE., E. ORANGE, N. J.
Telephone ORANGE 5-0377

***ARLINCO RESEARCH LABORATORY, INC.**

Research, Formulation and Application to the Industry. Ethical Pharmaceuticals, Drugs, Cosmetics and Perfumery.

333 W. 52nd St., New York 19, N. Y.
PLaza 7-3861

* R.F.-Inco means: Applied Research Laboratory, Incorp

FOOD RESEARCH LABORATORIES, INC.

Founded 1922
Philip B. Hawk, Ph.D., President
Bernard L. Oser, Ph.D., Director

Research ◆ Analyses ◆ Consultation
Biological, Nutritional, Toxicological Studies for the Food, Drug and Allied Industries
48-14 33rd Street, Long Island City 1, N. Y.

FOSTER D. SNELL, INC.
CHEMICAL & ENGINEERING CONSULTANTS

DERMATOLOGICAL & BACTERIOLOGICAL STUDIES
COSMETIC FORMULATIONS DEVELOPED
TOXICITY, STERILITY & PATCH TESTS
29 W. 15th St. N. Y. 11, N. Y. WA 4-8800

EVANS RESEARCH & DEVELOPMENT CORP.

Chemical research—processes—products
Special facilities for cosmetics

SEND FOR BOOKLET "D"
250 E. 43rd St., N. Y. 17, N. Y. MU. 3-0071

RONALD CLARKSON
Tablet Consultant

A complete Advisory Service on New Tablet Products–New Tablet Applications–Special Coating Problems–Formula Developing–Production Methods–Plant Layout. Pharmaceutical–Chemical–Industrial–Food–Confections–Cosmetics–Toiletries.
1905 GRANT AVE., PHILADELPHIA 15, PA.
ORchard 3-4306

ALBERT B. PACINI, Sc.D.

Cosmetic Consultant

Processes • Products

298 N. Maple Ave. East Orange, N. J.
Tel.: ORANGE 2-7896

Professional Service and Classified Advertising

Machinery and Equipment For Sale

UNION
Rebuilt Machinery
Established 1912

MODERN REBUILT AND GUARANTEED EQUIPMENT
At Reduced Prices

Stokes and Smith G1 and G4 Auger Powder Fillers and Cappers.
Triangle Model SHA Automatic Net Weigher and Carton Sealer.
Day and Robinson 100 and 4000 lbs. Dry Powder Mixers and Sifters.
Hobart and Read 80 qt. Vertical Mixers.
Knapp E adj. wraparound and spot Labeler, 1 gal. (jars with ears).
Burt Automatic Wraparound Labeler.
Colton 4PF Worm type Cream Filler.
Ertel and Republic Filters.
Ertel 10 head S.A. Vacuum Filler.
Ertel Hand Vacuum Filler.
Filler Machine late models 1, 2, 4 and 8 head Stainless Steel Piston Fillers.
Pony M and MX Labelrites.
Ermold & World Semi & Fully Auto. Rotary and Straightaway Labelers.
Stokes and Colton Late Style Rotary Tablet Machines.
F. J. Stokes DDS2 23-punch Rotary Tablet Machine.
Triangle G2C, A60A Electri Pak Fillers.
Package Machinery FA, FA2, FAQ and FA2Q Auto. Wrappers.
Hayssen 3-7, Knapp JS and Scandia SSU1 Auto. Cellophane Wrappers.
Standard Knapp 429 Carton Sealers.

Many Other Items of Interest in Stock - Fully Guaranteed

Tell Us Your Requirements

Union STANDARD EQUIPMENT CO.
318-322 LAFAYETTE ST., N. Y. 12, N. Y.

FOR SALE: Day 1200 lb. Steel powder Mixer and Sifter. U. S. Stainless Steel Colloid Mill 5 HP. Also other sizes. Standard Automatic "Samco Jr." Vac. Bottle Filler. Three Roll W. C. Steel Mills. 3" x 9", 6" x 14", 12" x 30", and 16" x 40". Four Roll 12" x 36" vert. Steel W. C. Mill. Dryers Atmos. and Vac. Pebble, Jar and Ball Mills. Stokes High Vac. Pumps. Homogenizers. Knapp Can Labeler. Stokes and Smith and Day Powder Fillers. Day Powder Mixers, 50 to 2500 lb. Rotex Sifters 20" x 48" to 40" x 120". Sealing, Closing and Wrapping Machines. Colton Tube and Jar Fillers and Closers. Edson 6 and 8 spout siphon bottle Fillers. Stokes and Colton Rotary and Single Punch Tablet Machines. ½ to 3". Sharples Centrifuges. Tolhurst Centrifugals 26" to 48". Sperry and Shriver Filter Presses 12" to 42". Stainless Steel, glass lined, aluminum, copper, iron and steel, jack. Kettles and Tanks. Portable, elec. Mixers, ¾ to 2 HP. Pumps. Liquid and Paste Mixers. Filters. Grinders. Crushers and Pulverizers. Stills. Soap Machinery, etc. Send for special bulletin. We buy your surplus equipment. Stein Equipment Company, 90 West Street, New York 6, N. Y.

"L'ART de la PARFUMERIE par EXCELLENCE"
DR. JEAN JACQUES MARTINAT
PERFUMER CONSULTANT

Creations of Highly Original Perfumes.
Duplications of Most Difficult Fragrances.
Unique Kind of Profesional Services.
333 West 52nd St., New York 19, N. Y. Tel. PL. 7-3861

Machinery and Equipment For Sale

ROY ALAN HIGH SPEED 4 x 8 and 6 x 12 THREE ROLLER MILLS FOR WET GRINDING AND DISPERSION. WATER COOLED. ROLLER BEARINGS THROUGHOUT. WRITE WESTERN ROY ALAN CORP., TORRANCE, CALIFORNIA.

FOR SALE: Complete equipment of Drug and Pharmaceutical Manufacturing Plant in Detroit:—Such as:—Fitzpatrick Model D Comminutors; Day 40 gal. Pony Mixers; Day 200 and 600 lb. Sifters and Mixers; 32" to 38" Copper Coating Pan; Tablet Machines; Liquid and Powder Fillers and Conveyors; Glass Lined and Stainless Steel Storage Tanks etc. Send inquiries to The Machinery and Equipment Corporation, 533 West Broadway, New York 12, N. Y. GRamercy 5-6680.

FOR SALE: 1-Standard-Knapp Self-adjusting No. 429 Auto. Carton Gluer and Compression unit; 3-Colton 3DT Tablet Machines with 1" punch and die (send for list of other exceptional buys in tablet machines); World Auto. and semi-auto. Labelers; Stokes 79-80 Tube Filler, Closer and Clipper; Vacuum and gravity type Fillers; 200, 250, 650, 700, 800 gal. Aluminum tanks; 40, 60 and 80 gal. Stainless, Aluminum and Copper Kettles. Save money by sending us your inquiries. We are also in the market for your surplus equipment. Consolidated Products Company, 14-15 Park Row, New York 7, N. Y. Phone: BArclay 7-0600.

Help Wanted

FLAVOR EXPERT Experienced in bulk field wanted by large, well established Eastern manufacturer with complete facilities. Prefer man with both production and sales experience capable of ultimately managing department. Reply with full details including age, experience, previous connections. Salary and Commission basis. Box M-1, DRUG AND COSMETIC INDUSTRY.

Situations Wanted

ORGANIC CHEMIST B.S. and M.S. in Chem. Eng., Ph.D. 13 years experience in essential oils, isolates, aromatic chemicals and organic synthesis. Research, development group leader; production plant superintendent. Publications, Sigma Xi. Age 38, married. Desires research, development or production position. Available March 1. Box M-3, DRUG AND COSMETIC INDUSTRY.

DIRECTOR PHARMACEUTICAL Production and control. Medium size company. Box M-4, DRUG AND COSMETIC INDUSTRY.

Business Opportunities

FINE QUALITY Cleansing Cold Cream; Ultra white; full pound jars; thirty cents jar. J. O. Thompson, 1566 East 18th Street, Cleveland 14, Ohio.

WHAT'S YOUR TROUBLE? Cosmetic Chemist long experience can help you. There are no short cuts to experience. Saves you time and money. Tell me what you want. I will send you finished samples of the products you want and cost of the formulas before you buy. If its New I have it. Creme Rinse. Creme Shampoo. Concentrated Shampoo pound makes a gallon. Dandruff Remover Shampoo. No soap, no alcohol. Won't dry the hair. New Hand Cremes and Lotions. Cosmetic Chemist. 5634 Lucas-Hunt Road. St. Louis 20, Mo.

WANTED: Mfg. representatives with cosmetic retail stores following to handle complete line of ornamented lipstick containers, compacts, perfume dispensers, etc. exclusive styling. Also patent pending brand new lipstick item. Box M-2, DRUG AND COSMETIC INDUSTRY.

PRIVATE LABEL PACKAGING: Complete service, manufacturing, assemblying, warehousing, shipping—lipsticks, creams, lotions, ointments in tubes; jars, etc. Large or small runs. Sorbel Company, 126-12, 101st Avenue, Richmond Hill 19, New York.

The C. E. Ising Corporation

Manufacturing Chemists

AROMATIC PRODUCTS

"I.G." ("ISING" GERMICIDE)

SOAPS FOR KENNELS AND INDUSTRIES

MASKING ODORS FOR INDUSTRIES

FOUNDED 1908

FLUSHING NEW YORK

CERTIFIED COSMETIC COLORS

Also

COSMETIC Inorganic Pigments

SUBMIT YOUR INQUIRIES

INTERSTATE COLOR CO., INC.

5-7 Beekman Street New York City (7)

SEYDEL

BENZOIC ACID U. S. P. and Tech.

BENZYL ALCOHOL F. F. C.

BENZYL BENZOATE U.S.P.

ETHYL AMINO BENZOATE U.S.P.

PARA AMINOBENZOIC ACID PURIFIED

SODIUM BENZOATE U.S.P.

Booklet describing "Seydel" fine chemicals available on request.

SEYDEL CHEMICAL COMPANY

Established 1904 JERSEY CITY 2, N.J. Cable Address "SIZOL"

Aromatic Chemicals

FOR PERFUMERY AND FLAVORS

Isopropyl Quinoline • Ethyl Anthranilate

Isobutyl Quinoline • Skatol • Butyl Anthranilate

Tertiary Butyl Quinoline • Butyl Betanaphthol

FAIRMOUNT CHEMICAL CO., INC.

136 LIBERTY STREET • NEW YORK 6, N. Y.

Write for new descriptive booklet

Cachalot®

cetyl oleyl stearyl

fatty alcohols

M. MICHEL AND COMPANY, INC.

90 BROAD STREET • NEW YORK 4, N. Y.

since 1926 basic suppliers to chemical manufacturers and distributors

Methyl • Ethyl • Propyl • Butyl

PARA-HYDROXY BENZOATES

SOLD AS "CHEMOSEPTS" BY

CHEMO PURO MFG. CORP. LONG ISLAND CITY • N. Y.

MAKERS of FINE and PHARMACEUTICAL CHEMICALS

BOOKS:

As a convenience to our subscribers we offer the books of all publishers—technical and non-technical—at the regular published price—postage paid anywhere.

Consult our BOOK DEPARTMENT — direct your inquiries to

Book Department

Drug & Cosmetic Industry

101 West 31st St., New York 1, N. Y.

MEdallion 3-3177

MOULDS

LIPSTICK • SANITARY LIPSTICK • STYPTIC PENCILS • SUPPOSITORIES • MASCARA

PROGRESSIVE MACHINE WORKS

137 West 22nd St., New York 11, N. Y.

ROUGE • COMPACT POWDER

also

PUNCHES FOR TABLETS DIES

Cosmetics... prepared to your taste!

Like all successful chefs, our cosmetic formulation experts cater to the discriminating tastes of our customers. The finest products are developed on basic proven formulas, adapted to meet your specifications; blended by the practiced hand of thoroughly experienced cosmetic chemists. Their perfection is achieved through constant research and analysis of the customer's requirements.

Our laboratory has available hundreds of tested formulas which can be modified to fulfill your needs in private label cosmetic manufacture. We can create completely new products to conform with your needs.

KLINKER

MANUFACTURING COMPANY

9210 BUCKEYE ROAD • CLEVELAND 4, OHIO

MANUFACTURERS OF PRIVATE LABEL COSMETICS SINCE 1900

ADVERTISING INDEX

Albek, Inc., Albert....340
Aluminum Company of America..Insert facing 309
American Cholesterol Products, Inc....359
Amino Products Corp....362
Anchor-Hocking Glass Corp...Insert bet. 288-289
Anderson Bros. Mfg. Co....314
Arnold, Hoffman & Co....341
Aromatic Products, Inc....Insert facing 260

Baker Chemical Co., J. T....Insert facing 300
Barr & Company, G....336
Beauty Fashion....260
Blendette Mfg. Company....360
Book Department....364
Bridgeport Metal Goods Mfg. Co....336
Brown Bag Filling Machine Co....314
Bush & Co., W. J....365

Calco Chemical Division....294
Calif. Fruit Growers Ex....Insert facing 317
Carr-Lowrey Glass Co....296
Cavalla, Inc., A....365
Chemo-Puro Mfg. Corp....367
Chiris Co., Inc., Antoine....252
Colgate-Palmolive-Peet Co....362
Colton Company, Arthur....310
Commercial Solvents Corp....298
Cosmetries, Inc....365
Crown Cork Specialty Corp....286

Danco, Inc., Gerard J....328
Devold Oil Co., Inc., Peder....349
Distillation Products, Inc....253, 302
Dodge & Olcott, Inc....Insert facing 324
Dodwell & Company....347
Dow Chemical Co....Insert facing 304
Dunkel & Co., Inc., Paul A....345
Durlin Corp....Insert facing 253

Ertel Engineering....354
Exact Weight Scale Co....313

Fairmount Chemical Co....367
Felton Chemical Co., Inc....Insert facing 316
Firmenich & Co., Inc....Insert facing 249
Florasynth Labs., Inc....251
Fritzsche Brothers, Inc....Insert bet. 332-333

Gair Company, Inc., Robert..Insert bet. 292-293
Gane & Ingram, Inc....356
Givaudan-Delawanna, Inc....Insert bet. 252-253
Glycerine Producers Assn....Insert facing 248
Glyco Products Co., Inc....355
Greeff & Co., R. W....342
Gross & Company, A....330
Gunning & Gunning, Inc....353

Hazel-Atlas Glass Company....Insert facing 292
Heyden Chemical Corp....Insert bet. 260-261
Hinde & Dauche Paper Co....Insert facing 289
Hoffman Inc., William A....326
Hoffmann-La Roche, Inc....259, 334
Hooker Electrochemical Co....350
Hormann & Co., F. R....314
Huisking & Co., Inc., Chas. L....349

Industrial Chemical Sales....Cover 2
Inland-Alkaloid Co....354
Innis-Speiden Company....Insert bet. 260-261
Interstate Color Co....367
Ising Corp., C. E....367
Island Equipment Corp....314
Ivers-Lee Company....293

Jelly & Co., Walter H. 358

Kelton Cosmetics Co....348
Kessler Chemical Co....322
Kiefer Machine Co., Karl....Insert facing 308
Kimble Glass Div. of Owens-Illinois Glass Co....Insert facing 288
Klinker Mfg. Co....368
Kolar Laboratories, Inc....319
Kolmar Laboratories....Insert facing 320
Koster-Keunen Mfg. Co., Inc....322

Lautier Fils....258
Leuders & Co., George....Insert facing 257
Lusteroid Container Co....361

Magnus, Mabee & Reynard, Inc....257
Mallinckrodt Chemical Works...Insert facing 261
Maryland Glass Corp....Insert facing 252
Mathieu, Inc., Charles....326
Merck & Co., Inc....250
Metalsmiths Div., Orange Roller Bearing Co...356
Metzgar Company....350
Michel & Company, Inc., M....367
Modern Cosmetics....364
Monsanto Chemical Co....Insert bet. 256-257

Neumann, Buslee & Wolte, Inc....352
New Jersey Zinc Co....343
Norda Essential Oil & Chemical..Insert facing 305

Orbis Products Corp....Insert facing 321
Owens-Illinois Glass Co....Insert facing 293

Package Machinery Company....306
Pantone Press....357
Parsons Imports, M. W....328
Penick & Co., S. B....248
Pennsylvania Glass Products, Co., Inc....282
Perl Machine Mfg. Co....310
Pfaltz & Bauer Co., Inc....362
Pfizer & Co., Inc., Chas....Cover 4
Pittsburgh Lectrodryer Corp....315
Plax Corp. Div., Hartford-Empire Co. Insert facing 284
Pneumatic Scale Corp., Ltd....Insert facing 312
Polak & Schwarz, Inc....Insert facing 256
Polak's Frutal Works....346
Potdevin Machine Co....360
Progressive Machine Works....367

Reheis Company, Inc....357
Richford Corp....289, 318, 351
Robinson Wagner Company....362
Roure-Dupont, Inc....254

Santonin Company of America, Inc....349
Schimmel & Co., Inc....256
Seydel Chemical Co....367
Sheffield Tube Corp....245
Standard Cap & Moulding Co., Inc. Insert facing 285
Standard Pharmacal Co....352
Sterwin Chemicals, Inc....247
Stokes Machine Co., F. J....Insert facing 313
Strong Cobb & Co., Inc....Insert facing 325
Sturge, Ltd., John & E....249
Swindell Bros., Inc....292
Synfleur Scientific Labs....Insert facing 301

Tamms Industries, Inc....365
Terkelsen Machine Co....310
Thurston & Braidich....363
Trade-Mark Record Book....358

Ungerer & Co., Inc....Cover 3
U. S. Bottlers Machinery Co....313

van Ameringen-Haebler, Inc....Insert bet. 248-249
Verona Chemical Co....Insert bet. 256-257
Vitamerican Oil Corporation....342

Welch, Holme & Clark, Inc....344
Will & Baumer Candle Co....255
Wolf & Co., Jacques....363
Woman's Day....290-291